



FIRST NATION GOODS

SCHOOL SUPPLIES

SCIENCE

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ALL KITS ARE PACKAGED IN A MOBILE SCIENCE STORAGE CONTAINER!

SCIENCE KITS CLASSROOM KITS

Customize Your Cart in **3 EASY STEPS!**

Got a Kit Idea? Contact US!

1-800-668-0600

Step 1

CHOOSE your CART

Step 2

SELECT your SCIENCE KITS

Step 3

PLACE your ORDER



Spectrum Large Storage Cart

3 Metal Shelves can be adjusted to different heights. The frame of the rack is thick with rounded corners; four durable wheels are included. Shelves measure 108 cm W x 35 cm D. The Spectrum storage rack measures 109 cm H x 126 cm W x 40 cm D. (Kits sold separately.)
730689 \$262.92



Spectrum Medium Storage Cart

3 Metal Shelves can be adjusted to different heights. The frame of the rack is thick with rounded corners and also includes 4 durable wheels of which 2 are locking. Shelves measure 81 cm W x 35 cm D. Cart measures 97 cm W x 108 cm H x 40 cm D. (Kits sold separately.)
730913 \$249.92

Storage Container for Mobile Science Cart
730691 \$6.50 ea.



Spectrum Compact Storage Cart

3 Metal Shelves can be adjusted to different heights; the frame of the rack is thick with rounded corners. Includes 4 durable wheels of which 2 are locking. Shelves measure 56 cm W x 39 cm D. Cart measures 109 cm H x 69 cm W x 40 cm D. (Kits sold separately.)
730690 \$239.92



Spectrum's Electricity Kit

730682 \$109.92

(Visit spectrumed.ca for more details.)



Spectrum's Sound, Light & Optics Kit

730679 \$249.92

(Visit spectrumed.ca for more details.)



Spectrum Coding Kit

95551 \$121.92



Spectrum's Magnetic Resource Kit



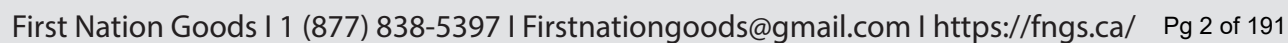
Spectrum's Pneumatics/Hydraulics Kit

730683 \$129.92

(Visit spectrumed.ca for more details.)



CLASSROOM KITS





Z50810M

GrowFrame. Can be placed on a tabletop or hung on a wall. Built-in fan turns the unit into a Bio-Air Refresher that helps to purify the air. Features adjustable lighting and 22 planting sites that fit any 2-1/2" flower pot. Water capacity: 0.7 gallons. 25-11/16" L x 19-13/16" W x 4-3/8" H.

Z50810M \$540.85

Grow Kit

1 seedling tray, 24 nutrient starters and 4 packs of 30 Grow Sponges: 2 basil, 2 lemon balm. Use with OPCOM® Farm GrowFrame (Z50810M).

SB53021M \$37.25

Nourishment Starter Kit

24 nutrient starters. Use with OPCOM® Farm GrowFrame (Z50810M).

SB53022M \$23.25



Z50809M

GrowBox. Tabletop unit offers four adjustable LED lights and 50 planting sites for sponges. Accommodates vining plants and plants over 3" tall. Water capacity: 3.9 gallons. 41" L x 23" W x 42" H.

Z50809M \$1,200.00

Black Cloth Cover

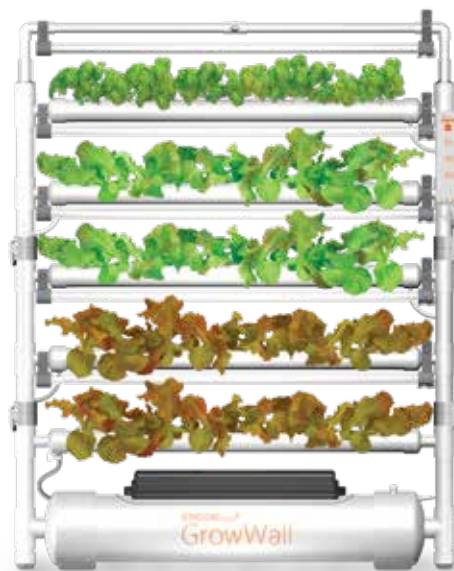
Use with OPCOM® Farm GrowBox (Z50809M).

SB53037M \$54.55

OPCOM® FARM GROW HYDROPONICS SYSTEMS

All-in-one hydroponic growing systems designed for indoor growing year-round use 90% less water than conventional outdoor gardening. Automated control system manages light and water circulation efficiently with one touch. High-intensity LED lighting simulates sunlight across the full color spectrum to help plants thrive. Open frame makes accessing plants easy. Ideal for growing vegetables or flowering plants. Each system includes: starter kit with seeds, pH meter, Conductivity meter, and nutrients. Power: 100V-240V (±10%). Shipped directly from our supplier; please allow for extra delivery time.

For more
OPCOM®
products visit:
spectrumed.ca



Z50812M

GrowWall. Space-saving, vertical design offers five levels of growing space. Plant quantity also makes the unit a Bio-Air Refresher that helps to purify the air. Includes angle- and height-adjustable 4-ft. light tubes and 75 plant sites. Water capacity: 71 gallons. 57-11/16" L x 6-5/8" W x 70-11/16" H.

Z50812M \$1,441.00

Grow Kit

Includes 2 seedling trays, 120 grow sponges each for green lettuce, red leaf lettuce, and basil, 3 nutrient starters, 15 nutrient adjusters, and 30 pH adjusters (15 each of positive and negative). Use with Farm GrowWall. (Z50812M).

SB53018M \$126.45



Z50811M

GrowWall2.

Using Nutrient Film Technique (NFT), this refrigerator sized unit features a five-tier design and adjustable dual pipelines that fit standard pots (ranging from 1"-4"). High-capacity unit fits up to 80 plants if 1/2" sponges are planted. Multiple tanks can be linked together and synchronized with included Smart Box. Plant quantity also makes the unit a Bio-Air refresher that helps to purify the air. Water capacity: 12.2 gallons. 10-3/8" L x 30-5/8" W x 86-5/8" H.

Z50811M \$1,609.95

Grow Kit

2 seedling trays, 120 grow sponges each for green lettuce, red leaf lettuce, and basil; 3 nutrient starters, 15 nutrient adjusters, and 30 pH adjusters (15 positive, 15 negative). Use with OPCOM® Farm GrowWall2 (Z50811M).

SB53026M \$733.85

Black Cloth Cover

Use with OPCOM® Farm GrowWall2 (Z50811M).

SB53028M \$79.65

Nourishment Kit

18 nutrient packs: 3 starters, 15 adjusters. Use with OPCOM® Farm GrowBox (Z50809M), GrowWall (Z50812M), and GrowWall2 (Z50811M).

SB53020M \$37.25





Kitronik Lesson in a Box™ - The Environment Kit for BBC micro:bit

A complete set of teaching materials & resources to enable successful cross-curricular lessons. Lessons come with a detailed lesson plan, and related: class slides, workbooks, worksheets, checklists, technician's notes, assessment guidance, answers, and rubrics.

- Computing: Design the software for your Smart Greenhouse.
- Design and Technology: Build your Smart Greenhouse for specific environments.
- Biology: Learn about your Smart Greenhouse lessons and factors affecting photosynthesis.

Classroom Kit includes 10 student kits and 1 teacher set supplied in a large reusable container with sorting trays. Also included in the kit are:

- 5M of Silicone Tubing
- Classroom Poster (Life Cycle of a Plant)
- User Guide (assembly and coding)
- 2GB USB drive (documentation and lessons)

735669 \$1,250.50

Single-User Smart Greenhouse Kit includes:

- 2 plastic greenhouse enclosures
- 1 Environmental Control Board for micro:bit
- 1 Water Pump
- 1 ZIP Stick (LED's)
- 1 Mini Prong Moisture Sensor
- 5 Alligator Leads
- 1 ZIP extension cable
- 1 Screwdriver
- 1 User Guide (assembly and coding)

735670 \$85.45

Next-Generation Hydroponic LED GrowLight™

Get students of any age engaged in planting and tending their very own community garden!

What are they learning? They are beginning to grasp the fundamental concepts about science and the natural world - how much water is optimal for various plants, how temperature and lighting variable affect growth, different stages of growth, what roots are for, how plant growth changes with the seasons, and other variables for growing healthy plants.

The Next Generation Hydroponic LED GrowLight™ Kit includes everything needed to get started in creating a community garden, anywhere. It uses the latest LED light and hydroponic technology to increase yield and speed up growth.

Features:

- Growth is completely contained in the GrowLight™ unit.
- Easy to set-up, maintain and keep clean
- No-soil. GrowLight™ uses hydroponics and nutrient solutions to keep plants healthy
- Easy Set Day/Night Timer
- Expandable - Stack multiple units to create an even larger indoor garden!
- Full spectrum LED and recycled hydroponics systems
- Nutrition ingredients - no chemical fertilizer residue

1 year warranty.

735481 \$416.65

GreenThumb Classroom Greenhouse

Protect plants with these convenient greenhouses. Large zippered openings allow easy access to all plants. Two-tiered greenhouse with two sturdy wire shelves to keep potted plants off the ground yet allow plenty of room for growth. Clear vinyl cover fits snugly over metal frame. Assembles in minutes. Measures 36" W x 38" H x 19" D. Includes instructions. For indoor or outdoor use.

79866 \$99.50



Hydrolab

Complete greenhouse system for cultivating plants and vegetables in an "indoor" environment, without soil, using a modern Hydroponics system. The kit includes: a base, an adjustable translucent observation cover, four growing trays, a fertilizer tank, safe-for-kids chemicals, and bedding for propagating plant growth

732392 \$78.15



Hydroponics Lab

360° view of growing plants from the roots up! This set of 3 transparent tubes is a no-soil, mess-free way to explore hydroponics with water or any other media.

- Includes 3 test tubes in stands with support rods, seed baskets, and activity guide
- Durable, shatterproof plastic tubes measure 1.75" in diameter x 7"H each
- Stands each measure 3.5"D x 3.25"W x 2.75"H and have a write-on/wipe-off surface

77625 \$37.25

Perma-Nest Plant Trays

Seeds, bulbs, and plants grow faster in a Perma-Nest tray. Made of lustrous, strong plastic, they never harbor bacteria or harmful molds. Can be cold sterilized. Many uses after seed starting. Root your potted plants with consistent watering, or group them for an attractive display piece. Start slips and cuttings. Tested and purchased by more than 100 government and university botanical groups. Leakproof, never rot or rust. Ideal for African violets, gloxinias, centerpieces, etc.



4" x 8" x 2-12"

SB15178M \$4.95

13" x 15" x 3-12"

SB15172M \$15.55

22" x 11" x 2-12"

SB15173M \$16.55





Easy Grow Greenhouse®

Seeds sprout faster. Root cuttings start quicker, too. The Easy Grow Greenhouse® dome is specially designed to hold moisture and warmth inside - just like a greenhouse. Features 72 pop-out gro-cells in an 11" x 22" rugged plastic tray.
SB11127M \$12.35



EarthBox® Ready To Grow Kits

Get growing right away with this all-in-one EarthBox® kit. Each kit includes the four-piece growing system (EarthBox®, aeration screen, water fill tube, and two fitted mulch covers), one bag of OMRI Listed® all-natural dolomite, one 1-lb. bag of fertilizer, one 17-lb. bag of potting mix, and four casters.

733466 Synthetic \$97.05



All-In-One Greenhouse

No soil needed - just add water and the Jiffy-7® Pellets expand to form pot and soil all in one. Great for starting seeds or cuttings indoors. Package includes 25 Jiffy-7® Peat Pellets, sturdy base tray (reusable and recyclable), and a clear greenhouse dome.

SB28559M \$14.75



Three Piece Garden Set

Contains trowel, transplanter and cultivator. Stainless steel with mirror polish finish.



Sprout & Grow Window

See plant science in action from roots to leaves. Features transparent, self-supporting window planter that allows students to view what happens beneath the soil as plants sprout, develop roots and grow tall. Includes bean and pea seed packets, enriched soil for optimum growth, step-by-step instructions, suggested activities, and journal pages for writing about observations. Planter stands on a windowsill or tabletop.

732394 \$49.95



Vacuum Formed Square Pots

Quality pots in a variety of sizes for all your planting needs. All pots are vacuum formed. The trays are made with the special "Press-Fill" design to allow you to fill the tray from edge to edge in seconds. Black.

2-1/2" Square Pots

2-1/2" L x 2-1/2" W x 3-1/2" D.

Set of 32 Pots with Tray
SB42879M \$20.95

Set of 32 Pots Without Tray
SB42876M \$13.25

4-1/8" Square Pots

4-1/8" L x 4-1/8" W x 3-3/4" D.

Set of 15 Pots with Tray
SB42878M \$15.25



Jiffy® Peat Pots

Molded from a special mixture of 60% Canadian sphagnum peat moss and 40% recycled paper pulp to which soluble fertilizers have been added. Roots grow right through the bottom and sidewalls. 3" Round. Case of 1,500.



Jiffy-7® Peat Pellets

The finest method for producing highest quality transplants. Add a little water and it expands to its ultimate size of 1-3/4" in diameter by 2-1/8" in height, all neatly enclosed in the plastic net. The prepared unit may be used for direct sowing of flower, vegetable, and other seeds as well as for transplanting seedlings.

Packet of 24.

SA00407M \$7.45

Case of 1,000.

SA07926M \$228.45



Jiffy-Mix® Seed Starting Soil

Sixteen quarts of sterile, scientifically blended, lightly fertilized growing media. Fills approx. 64 three-inch pots.

S08460M \$36.65

4-Quart Bag.

Fills approx. 16 three-inch pots.

SB30115M \$10.55

3-in-1 Plant Meter Light/Moisture/Ph Meter

3-in-1 meter assists in correcting 3 major elements for successful growing.

731945 \$28.15

Plant Moisture Meter

731957 \$16.85

ph Plant Meter

731946 \$16.85



BIOLOGY

BOTANY

Nature Print® Paper

Nature Print® Paper undergoes a chemical change when exposed to sunlight. Images appear in minutes. Just select the specimens you wish to print. Arrange them on the paper and expose to sunlight for two to three minutes. Soak in water for a minute, then dry. The images you created will sharpen during drying. Pack of 30 sheets. 5" x 7" sheets. **5500210M \$15.15**



Absorption Paper

Thick, absorbent, non-fuzzy, white blotting paper. Good quality for all drying requirements. 12" x 18". Pkg. of 100. **SA04460M \$139.65**



Leaf Rubbing Plates

Make rubbings that help you learn to identify the most common leaf structures! Package of 16. **731170 \$17.45**

Plant Mounting Sheets

Cardboard herbarium sheets, size 11-1/2" x 16-1/2". Printed legend in lower right-hand corner for recording data. No rag content. 140-lb. weight paper. Package of 25. **C09647M \$28.55 per pkg.**



Seed Germination Paper

Tan creped towel used for seed germination. 100 sheets, 10" x 15". Shrink wrapped pack. **SB39211M \$56.45**

Plant Labels

Help your students identify, study, and remember the plants they see with these useful labels. Packages of 50. Measures 4" W x 58" H. **SB41071M \$4.95**



Tree Cookies

Explore the life cycle of trees right in your classroom! Students will be able to see the variations in tree species, estimate the age of the tree, and learn about the different factors that effect tree growth. Approximately 2"- 4" dia. Includes six tree cookies (one each of red oak, pine, walnut, basswood, ash, and red pine). **732390 \$28.25**

Lab-Aids® Dendrochronology: Tree Ring Dating Kit

Using the specially designed simulated tree cores, students will learn the important effects of climate on living things as they unravel secrets about the age and history of trees. They will also be asked to estimate the climate of a particular year in the distant past by carefully studying a tree's annual rings. Students will also attempt to establish the year when a piece of lumber was cut and when it started growing. Simulated tree cores are reusable. Includes 30 simulated tree cores (15 marked A and 15 marked X), a teacher's guide, and 30 student worksheets and guides. For 30 students. Takes one 50-minute class period to complete. **SB50433M \$113.15**



BioQuest® Tree Growth Study Kit

The BioQuest® Tree Growth Study Kit is designed to show students the variations of different tree species. Students will learn how seasonal growth changes the appearance of growth layers within the tree, and will find that spring wood and summer wood combine to produce annual rings. They will also learn how to estimate tree age by examining the annual rings of three different tree rounds. The kit includes three tree rounds (one each of oak, pine, and walnut), a hand magnifier, coloured marking pins, a metric ruler, six reproducible student guides, one teacher guide, reproducible activity sheets, and Trees: A Golden Guide book. **SB22657M \$50.75**



BioQuest® Biodiversity Tree Study Kit

Students will have the experience of working with six different varieties of tree species from a temperate climate region of North America. Information on the biodiversity of hardwood and softwood trees is provided, with directions for students to engage in hands-on inquiry exercises. Similar internal tree structures will be compared, while the variation between species will also be identified. Illustrations and directions are included in the study guides. Kit includes six assorted tree rounds (two softwood and four hardwood species), 15 hand magnifiers, coloured marking pins, 15 metric rulers, 15 reproducible student study guides, reproducible student activity sheets, teacher study guide, and a tree round information sheet to assist with tree identification. **SB26418M \$65.50**



What's that Tree?

From mighty redwoods and stately pines to beautiful cherry blossoms and dependable oaks, What's that Tree? Helps identify commonly found trees and is the perfect addition to every family's library.

128 pages. Paperback.
735104 \$12.95



Bean Germination

Give students a visual reference with this bean germination display. Five real bean seeds have been grown and encased in a 3½" W x 3½" H x ¾" D block of clear resin.

731190 \$38.70



Corn Germination

See the stages of seed germination in 3-D - frozen in time in these beautiful preserved specimens. Size 88 x 88 x 20mm.

731192 \$38.70



Root Systems

Specimens include: tap root (Helwingia chinensis), adventitious (Helwingia chinensis), nodulated (Glycine max), and fibrous (Bromus japonicas). Teacher information guide, student activity sheet, and answer key are included. Size is 6¾ x 4¾ x 1½ in.

77627 \$38.70



What's that Flower?

A beginner's guide to identifying wildflowers, What's that Flower? introduces readers to the 150 most common and interesting species and helps them identify each specimen.

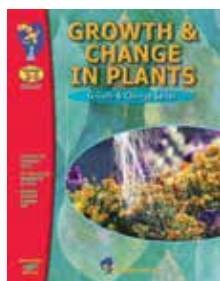
128 pages. Paperback.

735102 \$14.95

I Can Grow a Flower

Teach your child how a tiny seed grows into a flower in this fascinating lift-the-flap garden story. A pullout height chart ends the book—a great way for children to remember how a sunflower grows, and to measure how fast your child grows, too! Through illustrations, photography, and flaps, sixteen delightful board book pages reveal the wonder of how plants grow as you follow the story of a mystery seed. How it was planted? What does it need? What will it become? 18 pages.

735094 \$16.95



Growth and Change in Plants

Students will learn about the importance of plants as sources of food, shelter for people and animals, and suppliers of much of the world's oxygen. They will also learn the effect of human activities on plants. Answer key, 54 activities, 96 pages.

72844 \$22.20



How a Plant Grows

Topics include parts of a plant and life cycle, how plants make food, and why leaves change colour in the fall. 32 pages.

56760 \$17.50

SEEDS FOR GERMINATION

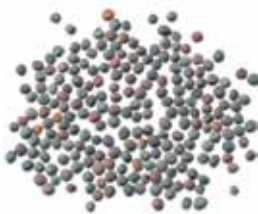


Fordhook Swiss Chard
Includes 15 g of seeds.

SB52496M \$6.55

Rainbow Swiss Chard
Includes 15 g of seeds.

SB52495M \$8.25



Mustard
2.5 g pkg.

SA05729M \$6.35 per pkg.



Bean, Lima. 1 oz.

SA05721M Per pack. \$4.15

SA05722M Per lb. \$16.35



Wheat
1-oz. pkg.

SA05740M \$1.55



Pea, Green Arrow

SA05730M 14 g pkg. \$5.45

SB07337M 1 lb. pkg. \$34.05



Marigold, Dwarf

440 mg pkg.

SA05727M \$6.35 per pkg.



Corn, Field

SA05736M 1-oz. pkg. \$5.45

SA05737M 1-lb. pkg. \$18.15



Rocket Arugula Seeds

Includes 15 g of seed.

SB52493M \$8.25



Radish

SA05732M 3.5 g pkg. \$2.85



Mesclun Mix Seeds

Includes 12 g of seed.



Grass, Rye

SB07330M \$3.25 per pkg.



Thai Basil Seeds

Includes 10 g of seed.

SB52490M \$9.05



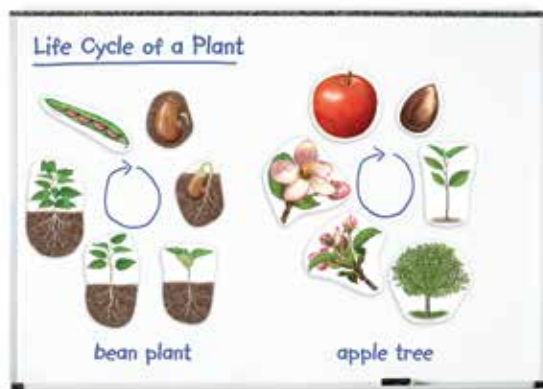


Foam Flower Model

This engaging teaching model with removable parts has been designed to introduce students of virtually any age to the flowering plant. Topics include: pollination, vegetative propagation, and the parts of a flower. Model size: 19.5" x 19.5" x 15".

64108 \$93.25

732250 Avec le guide français \$93.25



Giant Magnetic Plant Life Cycles

Set of 12 magnets with detailed stages of the bean plant life cycle (6) and the apple tree life cycle (6). Perfect for whiteboard use. Label-free for versatility. Similar to the magnetic Frog Life Cycle. Guide includes detailed information about each of the steps. Size of largest piece: about 8" x 8".

733542 \$30.60

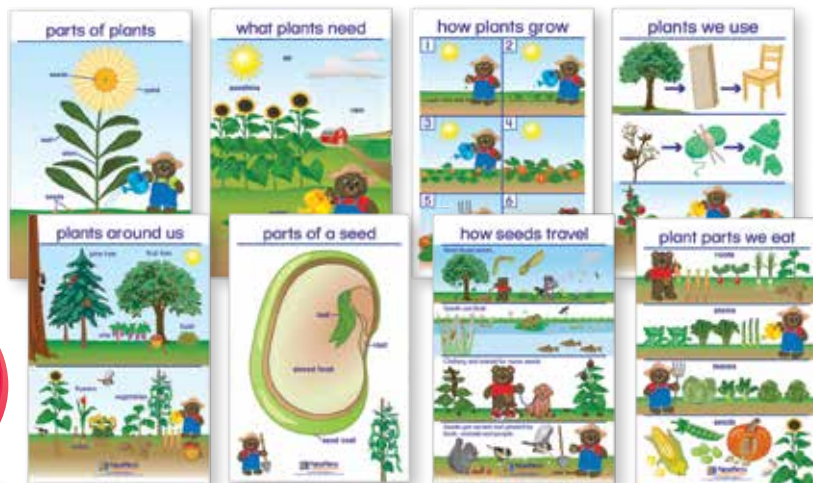
All About Plants Bulletin Board Charts - Set of 8

Features a collection of separate posters, each covering a separate, curriculum topic. Uniquely designed, while one side can be posted for student reference, the reverse features dry-erase activities perfect for individual student review or as a learning center activities! Graphic images and hands-on activities combine to provide comprehensive coverage of essential student skills and cover the current state and national standards – including Common Core! Each 12" x 18" Chart is laminated and double-sided – Side 1 features a graphic overview of the topic and Side 2 provides "write-on/wipe-off" activities.

All About Plants Bulletin Board Chart Set includes the following 8 charts:

- Parts of Plants
- What Plants Need
- How Plants Grow
- Plants We Use
- Plants Around Us
- Parts of a Seed
- How Seeds Travel
- Plant Parts We Eat

735694 \$39.95



Giant Flower Dicot Model

Your students will discover the arrangement of floral components, and the reproductive function of flowers. The petals, sepals, and stamens are detachable; students can begin the investigation with the model disassembled and "build" the flower as they learn about its parts and their functions. Floral structures are number-coded for identification in the key which accompanies the model. Overall dimensions: 17" x 14" x 10".

SB33511M \$465.65



Cross Section Flower Model

Demonstrate the parts of a flower in life science lessons with this durable foam tulip model. One half of cross-section is labeled with part names (stamen, petal, pistil, sepal, stem, leaf and roots); other half is labeled with letters for assessment activities. Activity Guide features discussion and labeled drawing of additional flower parts. Measures approximately 6" H.

731178 \$30.60



NewPath Learning®

Grouping of Plants Learning Center

Perfect for use in the classroom, after-school programs, or even at home for test preparation or practice and review, each Learning Center provides enough for up to 4 students to work independently or cooperatively on a specific, standards-based topic. Easy-to-setup and easy-to-store in the pouch provided, each Center includes 4 Visual Learning Guides focused on the same topic providing a graphic overview, "write-on/wipe-off" activities, and guiding assessment review questions. Also includes a 4-player Curriculum Mastery Game including 1 Set of 30 illustrated question cards and laminated game board.

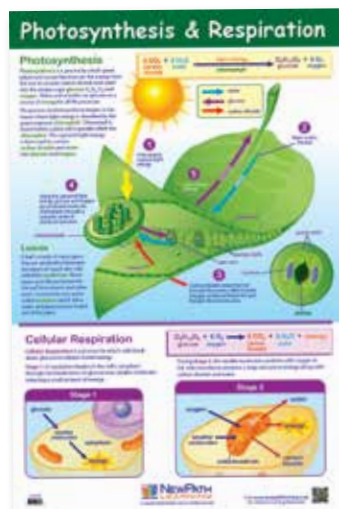
732048 \$49.85



Tree Leaves and Seeds Identification Mounts

This collection of 16 mounts is a nice survey of the diversity of trees across North America. Each species is represented by both leaves and seeds. Leaves and twigs are pressed and the fleshy fruits (such as red mulberry and black tupelo) have been freeze-dried for perfect presentation. This set covers both leaf studies and seed/fruit studies without fear of damage to the fragile specimens from handling. Each 5" x 8" mount is labeled on the back with common and scientific names, family, leaf arrangement, leaf type, tree size, fruit type, natural habitat, and a range map. All come housed in a convenient, 6" x 18" flip bin for easy filing and storage.

732386 \$124.05



Photosynthesis Poster

Comprehensive coverage of the steps of photosynthesis and the two stages of respiration. Poster is 23" x 35" and is laminated.

731034 \$29.95

Microlife Poster

Features illustrations and photographs of a typical bacterial cell, various fungi types, as well as amoeba, paramecium and euglena. Poster is 23" x 35" and is laminated.

731035 \$29.95

All About Plants Poster

Covers gymnosperms & angiosperms; seed structure; and non-vascular & vascular plants. Poster is 23" x 35" and is laminated.

731044 \$29.95



Photosynthesis Light Reactions 3-D Model Making Kit

A hands-on way to teach the light reactions of photosynthesis! Models are powerful tools for teaching science because they provide useful simplifications of structures and processes, helping to make the unseen seen and the complex simple. With this innovative model your students can follow how chloroplasts capture light energy and use it to synthesize sugars and other biomolecules. They will see how water is split when photons strike photosystem II and follow the electron carriers to photosystem I as ATP and NADPH are produced. The set covers non-cyclic photophosphorylation, the Z scheme, NADPH synthesis, how the proton gradient for ATP synthesis is made, looks at the structures of the photosystems and cyclic photophosphorylation.

735469 \$42.50



For
**MORE DETAILED
INFORMATION,**
please visit
spectrumed.ca

NewPath Learning® Curriculum Mastery® Flip Chart Set

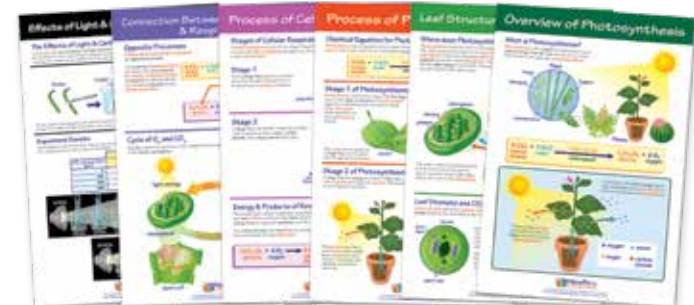
The set features 10 double-sided, laminated charts, each 12" x 18" and spiral bound on a durable, free-standing easel. Side 1 of each chart features a graphic overview of topic while Side 2 serves as "write-on/wipe-off" activity chart. Also includes Activity Guide featuring copy-masters and exercises.

All About Plants Flip Chart Set

731836 \$59.95

Photosynthesis and Cellular Respiration Flip Chart Set

731828 \$59.95



Photosynthesis & Respiration Bulletin Board Chart Set

Each 12" x 18" Chart is laminated and double-sided - Side 1 features a graphic overview of the topic and Side 2 provides "write-on/wipe-off" activities.

Includes the following charts:

- Overview of Photosynthesis
- Leaf Structure & Photosynthesis
- Process of Photosynthesis
- Effects of Light & CO₂ on Photosynthesis
- Process of Cellular Respiration
- Connection between Photosynthesis & Respiration

731809 \$39.95



BIOLOGY

AQUATIC



Flex-Tanks and Flex-Covers

Great for creating terrariums, small aquariums, or as a "critter" cage. Solves the cracking and breakage problem of rigid plastic and glass tanks. Unique features include: nestable design to save storage space, flexible, shatterproof material, molded foot pegs that prevent scratching and temperature transfer, rounded corners for easy clean up, and no-drip covers. Exclusive design forces condensation to remain in the tank.

Cat. No.	Description	Size	Each
SB17316M	1/2 gal. Flex-Tank Only	5-3/8" x 7" x 3-3/4"	\$4.95
SB18072M	1/2-gal. Flex-Cover Only	5-3/8" x 7"	\$2.85
SB19273M	1-1/2-gal. Flex-Tank with Flex-Cover	11" x 7" x 5"	\$14.65
SB12198M	1-1/2 gal. Flex-Tank Only	11" x 7" x 5"	\$9.55
SB18841M	1-1/2 gal. Flex-Cover Only	10-1/2" x 7"	\$4.95
SB13248M	1-1/2 gal. Domed Cover with Dial Ventilator	10-1/2" x 7" x 3-1/4"	\$11.25



Marina 5G LED Glass Aquarium Kit

Ideal for the beginning aquarist, the Marina 5G, LED Aquarium Kits come equipped with everything needed to make the novice fish hobbyist's first venture into the wonderful world of fish-keeping an easy and enjoyable experience.

Includes and Features:

- Marina Slim S10 clip-on filter with quick-change filter cartridges
- Long-lasting, natural daylight effect LED lighting module incorporated into aquarium canopy
- Nutrafin Max fish food to keep fish healthy
- Nutrafin Aqua Plus Water Conditioner to make tap water safe for fish
- Nutrafin Cycle Biological Supplement to create a biologically well-balanced and healthy aquarium environment
- Aquarium environment Fish net, made from fine soft mesh to protect delicate fins
- Aquarium Care Guide that includes advice on how to set up and maintain your aquarium

2283M \$128.40

Marina 10G LED Glass Aquarium Kit

2282M \$154.75

Tubing

Durable air line tubing fits all standard aquarium air pumps, gang valves, and air stone diffusers.

10-ft. Aquarium Air Line.
SB07971M \$4.35

100-ft. Aquarium Air Line.
SB07972M \$29.65



Aquarium Air Pump

Powerful air pump for up to 20-gal. aquariums using any type of bottom filter, standard under gravel filter, or an outside filter. Includes instructions and one-year warranty.

1042M \$27.15



Aqueon® Mini Bow™ Desktop Aquarium Kit

The perfect aquarium for classroom fun! This pint-sized starter kit takes up little space, so it's ideal for any room and decor. Kit includes: Mini Bow™ aquarium, Mini Bow™ quiet floor filter and cartridge, aquarium light hood, seven-watt incandescent bulb, set-up and care guide, water conditioner, and premium fish food.

SB47442M \$59.75



White Sand

Pure white silica sand for top dressing in aquariums, or may be used for seed germination. 4.54 kgs.

S09940M \$14.85

Aquarium Gravel

Natural-Red Flint Gravel. 4.54 kgs.

S09944(X)M \$13.65





Aquaponics Education Kit

Incorporate your aquaponics garden into a variety of classroom lessons. Supplemental education kit includes lesson plans each with background materials, activities and extension lessons. Each lesson is approximately 50 minutes. Designed for 1st-5th grade but can be adapted.

Included Materials:

- Printed Education Booklet
- Electronic Education Booklet with access code to new materials via Online portal
- Seed packets of Arugula, Italian Genovese Basil and Rainbow Swiss Chard
- 20 grams of Natural Fish Food
- 4 oz. bottle of Natural Water Dechlorinator

SB52672M \$151.95



AquaSprouts Garden Kit

Create a living ecosystem, then watch it grow and learn from it. Kit contains everything you need to turn any standard 10-gallon aquarium (not included; (SA04493M) into a self-sustaining ecosystem using the beauty of aquaponics. A great tool to explore how our natural environment works. Includes AquaSprouts Garden, light bar (bulbs not included; order separately (SB52236M) and (SB52864M), pump, timer, grow media, and a step-by-step guide. **SB51992M \$263.85**



Freshwater Master Test Kit

The Master Test Kit is a complete kit for testing aquarium water. Tests water 6 different ways to protect tropical fish from dangerous water conditions. Tests pH, High Range pH, Ammonia, Nitrite, Nitrate, GH (general hardness).

Kit Includes:

- All tests required to accurately test the nitrogen cycle
- Laminated colour card
- 4 test tubes
- Holding tray

SB52644M \$49.75





ABO/Rh Blood Typing

The most procedurally accurate simulation of the blood typing technique available. Students test and determine the ABO/Rh blood types of four different simulated blood samples. Simply combine blood samples and antisera, gently agitate the blood typing tray, and observe the results. No toothpicks, no stirring, and no waiting for results. Includes four donor samples, 40 blood typing trays, and one bottle each of simulated anti-A serum, simulated anti-B serum, and simulated anti-Rh serum. Kit contains materials for 10 groups.

SB48262M \$71.35

Kemtec™ Analysis of Drugs & Poisons Kit

Enables students to identify some common over-the-counter drugs as well as learning test procedures for "controlled substances." NOTE: Controlled substances are simulated. Kit contains: universal indicator chart, Q-tips, depression plates, alka seltzer, sodium bicarbonate, aspirin, tylenol, pipettes, plastic bottles with dropper caps, red toothpicks, capillary tubes, chromatography paper, unknown A, unknown B, unknown powder X, unknown powder Y, unknown powder Z, simulated LSD, simulated marijuana, crime scene powder, universal indicator, simulated urine alanine, simulated urine glycine, simulated urine unknown, acetic acid, acidified ferric nitrate solution, potassium chromate solution, hydrochloric acid solution, lead nitrate solution, unknown heavy metal, mercury I nitrate solution, butanol, acetone, ninhydrin, instructor manual, student manual, student data sheets, methods of assessment manual, special needs materials, and MSDS.

SB49875M \$310.35



Forensic Chemistry of Hair Analysis

Discover how forensic scientists use hair to assist in solving crimes. You will discover the differences between human and animal hair as well as differences among different types of human hair. This activity includes a teacher's manual, student guide, analysis copy-masters, one box of microscope slides, one package of coverslips, deer hair sample, cat hair sample, four human hair samples, 15 forceps, and 15 wax pencils. Materials needed: light microscopes.

SB43606M \$113.15



ABO Blood Typing Kit Lab-Aids® No. 1

Students sample their own blood, determine their blood group, and receive firsthand awareness of tissue incompatibility. Individual, colour-coded, sterile components simplify procedure and guarantee results. The innovative Slide Guide® eliminates the need for glass slides. The blood serum is provided in spill proof, drop-controlled bottles that require no refrigeration. Complete for 30 Students.

SB13734AM \$175.50

Alcohol Prep Pads. 100 per box.

SB09360M \$15.80



ABO-Rh Combination Blood Typing Kit

All the features of the ABO Blood Typing Kit and the Rh Blood Typing Kit are combined in this kit with the addition of a Slide Guide® and student worksheets. The serum does not require refrigeration and has no expiration date. No special equipment or technique is required, and the entire activity is easily completed in a single lab period, including introduction, activity, observation, and discussion. Complete for 30 students.

SB13739AM \$195.60



Forensics Using Simulated Blood

Students act as lab technicians and assist investigators by examining evidence collected at a crime scene. Students first use a presumptive blood test to determine if a substance on a stained piece of cloth may be blood, and then determine the blood type of a sample collected at the scene. Students then compare their results to those samples provided from

two suspects. Includes 40 blood typing trays, 10 cotton swabs, cloth, four simulated blood samples (victim, two suspects, and crime scene evidence), three bottles of serum (anti-A, anti-B, and anti-Rh), one bottle of 70% ethanol, and two bottles of blood detection reagent. The kit contains enough materials for 10 groups.

SB48260M \$95.65



Footprint Analysis

Using a shoe print collected at the crime scene, your students will be able to determine critical information about the criminal! Includes a fully illustrated teacher's manual, six true-to-size castings of the evidence footprint, six photos of additional shoe print, six bags of dental stone (stronger and hardens more quickly than plaster), and six sets of shoe data records. Materials for 30 students working in groups of six.

SB48521M \$232.75

Footprints Analysis Refill. Replenishes the consumable components with enough material for one additional six-group use. Includes six packages of footprint casting material.

SB49175M \$60.85



Crime Scene Investigation Kits

Cross-curricular forensics kits complete with detailed teacher's guides, student worksheets and rubrics. Projects range from five days to several months or more and are easily adaptable to fit the time constraints of your class.

The Case of the Contaminated Creek - This cold case has an environmental twist. Really get them thinking this time! Five suspects worth of evidence to weed through as students analyze hair, glass, sand, lip prints, and even contaminated water and micro-invertebrate species to solve this who done it!

77630 \$329.75

The Case of the Kidnapped Cookies - Stage the crime with a kidnapping, a Spanish ransom note, lipstick, white powder and DNA evidence left as clues. Engage students from evidence collection and analysis right through the staged trial.

77631 \$314.65

The Case of the Lost Skull - Students work to solve the case by collecting and analyzing fingerprints, blood types, documents, hair and fibers. Imagine their surprise when they show up at class to find the scene complete with animal skull, money, shoeprint, and trace evidence to collect.

77632 \$329.75

The Case of the Missing Mascot - Your school mascot is missing, and the big game is days away! Students will discover a note, a mouth guard, leaves, and fibers at the scene. They will use dichotomous keys, learn to identify fibers using a flame test, and analyze handwriting, fingerprints, DNA evidence, and bite marks as they take this mystery from evidence to trial.

77633 \$314.65



77630

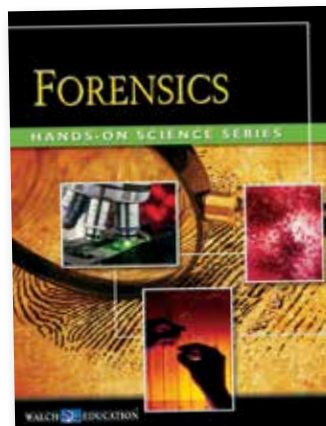


Forensic Science Kit

This kit is perfect for aspiring detectives. Includes real evidence and real forensic tests. Dust evidence for prints to match against suspect prints. Test fabric samples for the presence of blood. Your role, as Crime Scene Investigator, is to solve the murder of Missy Hammond.

733358 \$107.90

733360 Refill Kit \$61.60



Hands-On Science: Forensics

Working from crime scenarios, students will use chemical, biological, photographic, and other means to study the evidence and draw logical conclusions. Each activity serves as a complete introductory program to forensic science, a replacement unit, or an enrichment experience. All activities include teacher notes, material lists, and assessments. Sample topics from the 20 activities include blood pattern analysis, glass fracture patterns, photographing a crime scene, searching through garbage, microscopic fibers, and more! 162 pages.

SB47128M \$39.95

Forensic Insects

Hands-on exhibit shows how insect life cycles serve as biological timers. The life stages of a blowfly are shown with examples of eggs, larva, pupa, and adult with a description of the timing for each stage. The carrion beetle is similarly displayed with examples of the egg, larva, and adult stages. Also includes rove beetle, dermestid beetle, and clothes moth larvae, all also used to determine time of death. Each specimen is contained in a vial and fully labeled. 6" x 8".

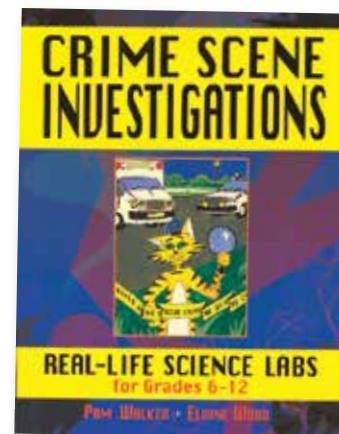
SB50605M \$93.05



Crime Scene Investigations

8-1/2" x 11". Softcover. Turn your students into super sleuths. Students will learn science concepts as they solve mysteries. All provide complete teacher background information and activity sheets that challenge students to observe carefully, organize and record data, think critically, and conduct tests to solve crimes. 288 pages. 68 exciting lessons. Crimes range from check forgery to murder. Labs are organized into four sections.

SB39171M \$66.45



BIOLOGY

FORENSICS



1. Crime Scene Barricade Tape

Yellow tape with black lettering is 3" wide, 1,000-ft. roll comes in a heavy-duty dispenser box.

SB49303M \$43.65



2. Number Stands 1-20

Large-format markers are 7-1/4" x 4-1/2" durable yellow plastic with a matte finish and black numbers. Small numbers in the corner of each marker are for close-up photography. Includes nylon storage bag.

SB51383M \$171.35

CSI Number & Letter Stand Sets

Markers for crime scene demonstration and photography. Each bright yellow marker measures 4" x 3" x 6". Folds along the score lines and interlocking tabs/slots make these stands sturdy. Each set comes on a micro-perforated sheet.

3. Number. 26 stands; numbered 1-26.

SB52396M \$15.45

4. Letter. 26 stands; lettered A-Z.

SB52397M \$15.45



①



1. Paper Evidence Bags

Write-on surfaces with space for description, location, and chain of custody. Pack of 100. 8" x 6" x 14".

SB49302M \$60.85

2. Biohazard Disposal Bags

Bags have heavy-duty zipper seals, write-on surface, and a pouch on the back to accommodate paperwork. 6" x 9". Pack of 100.

SB51389M \$20.05

1. Sterile Cotton-Tipped Swabs

Sterile swabs with tip protectors are individually wrapped. Aerated tip protector holds the swab away from the sides so it can be laid flat to air dry. Ideal for DNA and evidence collection. 7" L plastic shaft with cotton tips. Pack of 50.

SB51388M \$85.25



2. Crime Scene Template

Easily draw crime and accident scenes to scale. Template includes furniture and plumbing cutouts in two scales: 1/4":1 ft. and 1":10 ft. Useful for burglary reports, arson, traffic crimes, and other serious crime scenes. Features scale rulers for both scales, holes to fit a three-ring binder, and durability to be bent without cracking. 8-1/2" x 11".

SB51380M \$40.15



3. Self-Adhesive Evidence Labels

Plenty of space to record case number, date, chain of custody, and other essential information. White, self-adhesive label is convenient to use and easy to read. 3-1/2" x 5". Pack of 100.

SB51390M \$24.05

Luminol Reagent Powder

Designed for forensic detection of blood. Simply add 250 ml of distilled water to the dry luminol reagent, then spray the area of interest with the luminol solution and observe for blood evidence. 15 g.

SB52477M \$16.25



1. Forensic Blue Light Source

Only 6-1/2" L, it operates from three "AAA" batteries and emits a blue light in the 470 nm range. Comes with a viewing screen to see fluorescence from bodily fluid stains and fluorescent powdered fingerprints. Detects trace evidence and narcotics. Batteries provide approx. 10 hours of continuous use; LED light source is rated for approx. 10,000 hours of use.

SB51394M \$108.55

2. Shirt Pocket Long Wave UV Lamp

Includes spectroline UV-4B light, wrist strap, and instructions. 365 nm wavelength. Requires four "AA" alkaline batteries (not included). 6-1/4" L x 2-1/8" W x 3/4" D.

SB51392M \$80.35



Fingerprinting Supplies

The perfect accessories for properly documenting fingerprints for forensic experiments.

Plastic Fingerprint Ink

Considered "inkless," this pad leaves a crisp, clear imprint, never smears, dries instantly, and leaves no ink on fingers. Specially formulated ink does not dry out if pad is left open. 1,200 imprints per pad.

SB49300M \$10.85

Dark Ink Fingerprint Pad

Dark ink gives a very clear, crisp imprint and leaves very little residue on fingers. Dries instantly and does not smear.

SB49301M \$12.45

Applicant Record Cards

Package of 100 cards. Accepted by law enforcement agencies as a fingerprint record card and also used for employee applications by schools, banks, hospitals, security agencies, and more. Printed in process blue on 110-lb. index card stock.

SB49304M \$55.05



Latent Fingerprint Kit and Poster Set

Perfect for forensic science demonstrations and labs! Illustrates the three main fingerprint patterns: whorl, arch, and loop. Set contains a latent fingerprint kit, three laminated posters for whorl, arch, and loop (each 11" W x 16-1/2" H); and three, two-sided TearPads™ for whorl, arch, and loop (each 50-sheet pad is 8-1/2" x 11").

SB52384M \$85.15



Fingerprint Kits

Latent Fingerprint Kit.

Includes a 2 oz. bottle of bichromatic fingerprint powder, 6-1/2" Zephyr fingerprint brush, 1-1/2" W x 360" L roll of clear fingerprint lifting tape, and a pad of 100 glossy 3-1/2" x 5" latent print backing cards. Comes in a sturdy, protective carrying case.

SB51457M \$68.15



Magnetic Fingerprint Kit. Includes 1 oz. bottle of bichromatic magnetic fingerprint powder, magnetic powder applicator brush, 1-1/2" W x 360" L roll of clear fingerprint lifting tape, 2 oz. plastic specimen jar with cap, and a pad of 100 glossy 3-1/2" x 5" latent print backing cards. Comes in a sturdy, protective carrying case.

SB51456M \$88.35

Magnetic Fingerprint Powder

Fingerprint powder that produces cleaner prints with enhanced visibility. Use on porous, grained, and/or horizontal surfaces. 1 oz. bottle.

SB51362M \$15.95



Bichromatic Powder

Fingerprint powder that appears black on light surfaces and silver on dark surfaces. Excellent for dusting in multicolored areas. Best on nonporous surfaces. 2 oz. bottle.

SB51367M \$18.45



1 oz. bottle.



Black Powder

Fingerprint powder perfect for nonporous surfaces. 2 oz. bottles.

Forensic Chemistry of Dusting for Fingerprints

Students will learn how to identify different types of fingerprints and distinguishing characteristics, as well as dusting for fingerprints. This activity includes a teacher's manual, student guide, and analysis copy-masters. Includes one bottle of fingerprinting powder, 15 fingerprinting brushes, 15 hand magnifiers, ink pad, and acetate sheets. Enough material for 15 groups.

SB43581M \$131.75



Fingerprint Analysis Kit

Students will learn the fingerprinting techniques used by the FBI and other latent print examiners. After learning about these techniques and rolling and lifting prints, students will analyze a fingerprint found at the business office of the victims and compare it to several exemplar sets to determine if suspicious activity had occurred there. Contains materials for 30 students working in groups of six and a fully illustrated teacher's manual. Kit includes 30 hinge lifters, six brushes, dusting powder, professional fingerprinting ink pads, evidence fingerprint from office, and fingerprint cards from the suspects.

SB49168M \$260.95



Fingerprint Brushes

For use with regular (non-magnetic) fingerprint powders of all colours.

Regular. Soft, high-grade goat hair. Bristle length 1-1/4", overall length 6-1/4".

SB51372M \$8.75

Deluxe. Soft, high-grade goat hair. Bristle length 1-7/8", overall length 7".

SB51373M \$10.65

Maximum Coverage. Soft, high-grade goat hair. Bristle length 2", overall length 7".

SB51374M \$12.85

Latent Plus. Non-abrasive brush with soft fiberglass bristles.

SB51376M \$17.85

Zephyr. Made from thousands of fiberglass bristles that get softer with each use. Overall length 6-1/2".

SB51378M \$24.05

Feather Duster. Made from 4" marabou feathers. White.

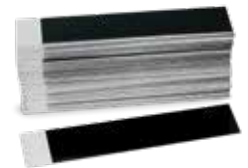
SB51377M \$22.85



SB51379M



SB51369M



SB51368M

Fingerprint Lifting Tape

Lifts powdered fingerprints. 1-1/2" W x 360" L roll.

SB51379M \$18.25

Inking Foils

Made from high-grade polyester film coated with a thin layer of fingerprint ink. To use, peel back to expose the ink and roll the fingers — prints are clear and sharp. Foils can be reused. 1" x 5". Pack of 200.

SB51368M \$35.75

Latent Print Backing Cards

Glossy white cards to preserve and document latent prints. 3-1/2" x 5". Pad of 50 cards.

SB51369M \$10.65



Magnetic Applicator

For use with magnetic fingerprint powder. Cluster of powder forms at the end of the wand; application is quicker and cleaner, and doesn't damage or scratch latent prints.

SB51370M \$43.35



BIOLOGY

GENETICS

Genetics & DNA

Head into the lab for an in-depth investigation of genetics, the branch of biology focused on heredity and variation in organisms, and DNA, the acid that holds the blueprints for life. Learn about dominant and recessive genes and play inheritance games to determine how traits will be expressed. Learn about the biology of reproduction, the components of cells, and how chromosomes are combined and copied. Assemble a model to see the elegant double-stranded helical structure of DNA. Then crack the genetic code and find out how the different parts, called nucleotides, fit together. Analyze DNA evidence to identify suspects and solve a crime. Breed your own bacteria colony to experiment survival of the fittest. Read about how mutation affects genes and how scientists clone plants and animals. Full-colour, 48-page manual.

733898 \$58.10

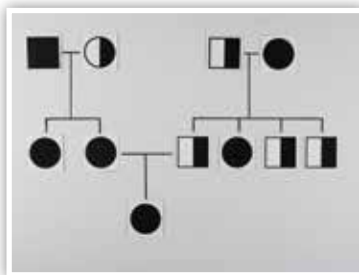


Stick to Science

Genetic Cards

Solve the puzzle of how genes are inherited and sometimes appear or disappear in families. Using these 36 magnetic shapes representing males and females with the three possible genetic combinations (affected, carriers, or not affected), all types of inheritance (complete dominance, incomplete dominance whether autosomal or sex linked) can be investigated. The teacher's guide has actual case studies and lesson outlines as well as reproducible student work sheets.

730166 \$14.10



Principles and Practice of Agarose Gel Electrophoresis

Demonstrate to your class how electrophoresis separates molecules on the basis of size and charge. A safe, simple, and colourful way to teach a technique that will engage your students. For 8 gels; complete in 45 minutes. Kit includes Ready-to-Load™ dye samples, agarose powder, practice gel loading solution, electrophoresis buffer, microtipped transfer pipettes, and instructions. Requires electrophoresis apparatus, power supply, microwave or hot plate (not included).

SB51181M \$117.85

Strawberry DNA Extraction Kit

Easy-to-use alternative to other DNA extraction kits! Students learn how to retrieve and isolate DNA from a strawberry. Includes 16 plastic eyedroppers, 26-oz. box of non-iodized salt, 16 heavy zip-close bags (4" x 6"), 16 wood splints, 70% isopropyl (rubbing) alcohol, cheesecloth, 9-oz. bottle of dish soap, eight 25 ml graduated cylinders, 16 clear plastic funnels, 16 centrifuge tubes with foam racks, one 14-14" W x 9-12" D x 6-78" H storage container, and instructions. For 32 students working in pairs.

SB50009M \$109.55



An Introduction to Electrophoresis

Economical two-part exercise provides an introduction to agarose gel electrophoresis and is designed for eight groups of students in two 40-60 minute lab periods. Includes four colorful dye mixtures and DNA. In the first part of the exercise, students identify unknown dye molecules by comparing their electrophoretic migration with the migration of known dyes. In the second part, students identify dye molecules that bind to DNA and determine the mechanism. Includes complete instructions, samples 1-4, DNA, eight transfer pipets (one ml each), agarose (5 grams), and TG buffer (contents makes 3.5 liters of re-usable buffer).

SB49181M \$93.05



DNA Electrophoresis Labs and Simulations

DNA electrophoresis is an easy, fun, exciting, and safe activity to perform in the classroom. It is a widely used technique that is carried out in DNA fingerprinting, paternity testing, genetic testing, and genetic engineering. These labs and simulations bring a wide variety of classroom activities to use in introducing electrophoresis into your lessons.



DNA Fingerprinting. Basic concepts of DNA

fingerprinting are featured in this lab by comparing crime scene DNA with suspect DNA. Fingerprinting patterns are separated by agarose gel electrophoresis and the students determine who may have done it! Includes: Ready-to-Load™ DNA samples, UltraSpec-Agarose™ powder, practice gel loading solution, electrophoresis buffer, InstaStain® Methylene Blue and Methylene Blue Plus™ stain, calibrated pipet, 100 ml graduated cylinder, microtipped transfer pipettes, and instructions. 60-minute lab.

SB45631M \$161.35

In Search of My Father. Solve the mystery of two boys separated from their parents a decade ago. Their biological mother is identified by mitochondrial DNA and their biological father from chromosomal DNA. Includes: Ready-to-Load™ dye samples, agarose powder, practice gel loading solution, electrophoresis buffer, microtipped transfer pipettes, and instructions. For up to 10 groups. 45-minute lab.

SB45636M \$125.85

DNA Extraction and Isolation Kit

A low-tech hands-on solution to presenting high-tech topics. Extract DNA from strawberries and examine physical properties. Provides everything necessary (except strawberries) along with cell lysating solutions and DNA precipitating solutions. Students extract DNA by crushing the strawberry, then lysing to release cell components and finally precipitating and viewing DNA after spooling DNA on a splint. Includes instructions and background information. Designed for a class of 32 students working in eight teams of four. Contains material to conduct two extractions. Easy to perform using frozen strawberries.

SB40666M \$170.65



Whose DNA Was Left Behind?

DNA fingerprinting is used in the identification of individuals based on DNA analysis of hair, skin, and blood. In this experiment, students use dye simulations as DNA samples and the criminal is identified from several suspects. Includes two samples from the crime scene, four samples from suspects, Ultra-Spec-Agarose™, 50X electrophoresis buffer, practice gel loading solution, transfer pipettes, and a teacher's guide with comprehensive student activities.



The Molecular Model of DNA and its Replication Kit Lab-Aids® No. 71

Using simple and exclusive components, students easily build their own 8-rung ladder segment of the DNA molecule based on the model proposed by Watson and Crick in 1953. The flexible model is twisted to form the double helix structure. The 12 model segments can be attached to each other to make a "giant" double helix DNA model that can also be coiled and will be more than 9 ft. long. Includes 50 student worksheets and guides, and detailed teacher's guide with full background information.

SB14279M \$189.35

DNA Model

This double helix DNA model is pre-assembled and measures 25 x 8 inches, made of durable and colourful plastic and depicts a 16 base pair section built to a scale of 10cm to 1nm. The model is supported on a circular stand, which can rotate allowing you to view all of the components. The phosphate and deoxyribose are accurately portrayed and can be removed and separated for further examination, along with the individual base pairs.

77629 \$104.63

22-Layer Advanced Mini DNA™ Model

Shows all of the major and minor grooves. Can also be used to demonstrate replication. Features 22 base pairs comprised of: 11 each of thymine (orange), adenine (blue), guanine (green), and cytosine (yellow). Side chain: 44 each of deoxyribose (red) and phosphate (purple). Approximate dimensions: 4-5/16" x 17-5/16". Includes stand.

SB42166M \$124.05

77629

SB42166M



DNA Starter Kit

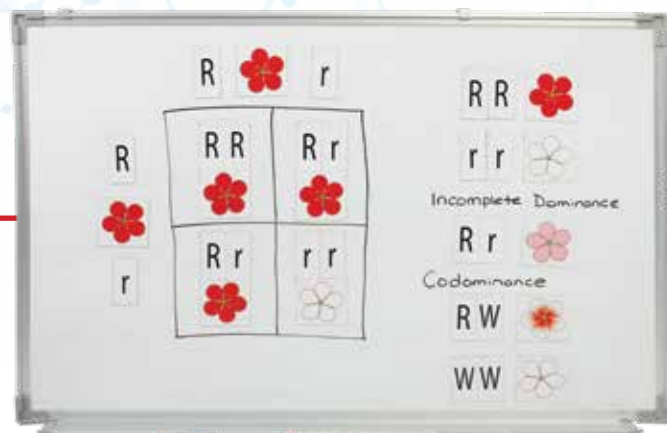
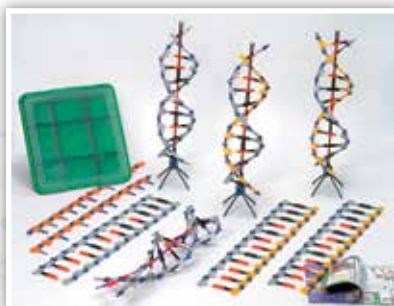
This kit is a schematic model that transforms from the familiar ladder shape to the double helix with a twist. Explore the structure of colour-coded DNA bases showing purines and pyrimidines that connect to a continuous sugar-phosphate backbone. Delve into replication and transcription. Using individual nucleotide triphosphates students can synthesize a new strand of DNA (one base at a time) showing the semi-conservative replication of DNA. Finally, they can synthesize mRNA (one base at a time) to show the process of transcription. The two-group set includes 102 bases (24 red adenine, 24 yellow thymine, 24 blue cytosine, 24 green guanine, six white uracil), eight continuous gray backbones, 48 gray sugar-phosphates, 24 lavender sugar-phosphates, and 96 orange phosphates.

SB49639M \$131.75

K'NEX® DNA, Replication & Transcription Set

Wonderfully flexible set allows students to build and learn using models that demonstrate phosphate groups, deoxyribose/ribose sugars, colour-coded hydrogen bonds, four codons, and colour-coded nucleotides. Builds seven different DNA and mRNA molecules. Build any one from 19 combinations at once. Pieces easily unsnap for replication and transcription activities. Includes: 521 K'NEX® pieces and a 24-page, full-colour building instruction booklet packed in a strong, stackable, plastic storage case with movable dividers and transparent lockable lid. Curriculum CD is now included with set.

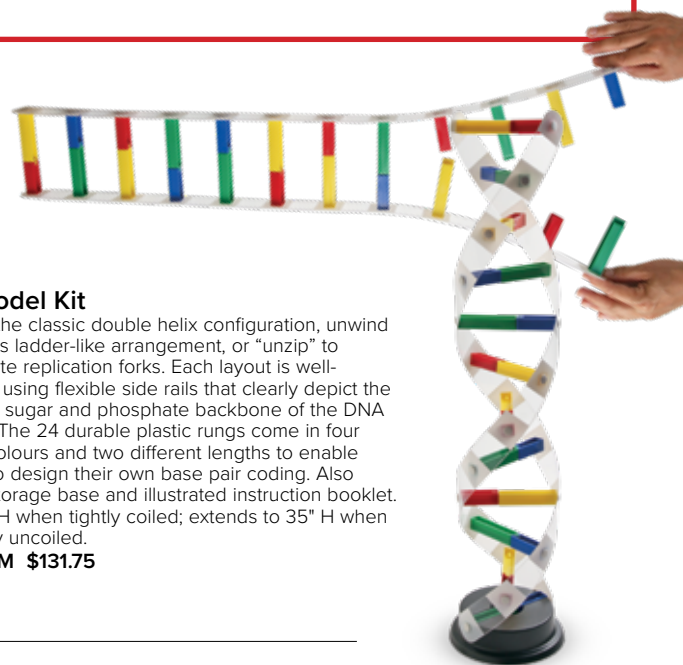
SB20326M \$99.75



Stick to Science Punnett Squares

Teach the important genetic concept of Punnett Squares. These 56 magnetic cards have red, white, pink and red and white flowers to be able to show three types of monohybrid crosses: complete dominance, incomplete dominance and codominance. Includes a detailed teacher's guide with sample questions included.

2332M \$24.25



DNA Model Kit

Twist into the classic double helix configuration, unwind to reveal its ladder-like arrangement, or "unzip" to demonstrate replication forks. Each layout is well-supported using flexible side rails that clearly depict the alternating sugar and phosphate backbone of the DNA molecule. The 24 durable plastic rungs come in four different colours and two different lengths to enable students to design their own base pair coding. Also includes storage base and illustrated instruction booklet. Stands 6" H when tightly coiled; extends to 35" H when completely uncoiled.

SB49793M \$131.75

DNA, RNA Protein Synthesis Kit

Lab-Aids® No. 72

Using individualized student worksheets and plastic, colour-coded components, students first build a DNA molecule, replicate it, and use half of the "ladder" to build mRNA (messenger RNA). Students experience how the information stored in DNA is expressed as a finished protein. Students conclude by disconnecting the protein chain from the tRNA, and the tRNAs from the mRNA, showing their availability to continue the process. Complete for 24 students working in pairs.

SB20188M \$512.25



BIOLOGY

CELLS & CELL PROCESSES

Cell Models

Simple for elementary level students yet comprehensive enough for middle school, these colourful teaching models were designed specifically for hands-on use. Models are made of resilient, nontoxic EVA foam to withstand years of active investigation. Each model comes with a thorough, detailed teacher's guide including five inquiry-based lab activities, reproducible worksheets, complete background information, cross-curricular extension activities, assessment ideas, and more.



Cell Model Set. Includes Animal Cell Model (64112) and Plant Cell Model (64110) below.
731222 \$179.95

Cell Model Set. French Version.
731222F \$179.95

Animal Cell Model. Topics covered include cell structure and function, osmosis, eukaryotes, bacteria, and more. Model stands approximately 35 cm tall.

64112 \$95.25

Animal Cell Model. French Version.
64112F \$95.25

Plant Cell Model. Topics covered include cell structure and function, osmosis, photosynthesis, pigments, and more. Model stands approximately 35 cm tall.

64110 \$95.25

Plant Cell Model. French Version.
64110F \$95.25



4D Science™ Cell Models

Gain a better understanding of the composition and structure of plant and animal cells by assembling these models and examining them. Each model features superbly detailed parts and a transparent outside for viewing internal structures. Includes display stand and instruction guide. 6".



Complete Set. Includes one of each cell model listed below.
SB51409M \$98.80

Animal Cell
Contains 26 detachable parts.
SB49141M \$58.55

Plant Cell
Contains 24 detachable parts.
SB49142M \$58.55



Cross Section of Cells Model Set

5" cross sections of a plant cell and an animal cell. One side in each cross section is labeled, the other side can be used for quizzes. Cross sections identify key organelles and their functions and comes with guide. Soft, durable foam construction. Includes animal cell cross section and plant cell cross section.

731208 \$69.95

Cross Section of Plant Cell Model. Green.
731206 \$39.95

Cross Section of Animal Cell Model. Blue.
731204 \$39.95



A. Simple Animal Cell 3-D Model Making Kit

A fun introduction to animal cells for all ages! Models are powerful tools for teaching science because they provide useful simplifications of structures and processes, helping to make the unseen seen and the complex simple. Learn about animal cells with our easy-to-make model. The model covers all the main parts of cells (cell membrane, nucleus, chromosomes, mitochondria). For more advanced learners, you can extend the model with optional parts (rough ER, smooth ER, and Golgi). The Model Making Kit includes enough materials for up to 10 paper models. The comprehensive Teacher Resource Guide included provides illustrated readings, activities, and key vocabulary.

735470 \$44.95



B. Simple Plant Cell 3-D Model Making Kit

Students will enjoy learning about plant cells with this colourful model. The model covers all the main parts of plant cells (cell membrane, cell wall, chloroplasts, nucleus, chromosomes, mitochondria). For more advanced learners, you can extend the model with optional organelles (rough ER, smooth ER, and Golgi). Students first assemble the plant cell model using the colourful parts. Then students can enhance the model and use the optional organelles to show more features.

735472 \$44.95



C. Simple Bacterial Cell 3-D Model Making Kit

Build a beautiful model of a bacteria! Bacteria are one of the oldest forms of life on Earth and cause many human diseases. Learn about these important organisms with our fun model. The model shows you the main parts of bacteria including the cell wall, cell membrane, genome, plasmid and flagellum. Our easy-to-make model does not need any tape or glue to build.

735471 \$44.95



Immune System 3-D Model Making Kit

Make the immune system easy to understand! This innovative model gives students an understanding of the cellular interactions of the immune system. Students make models of helper T cells, cytotoxic T cells, B cells, plasma cells, antibodies, cytokines, memory cells and phagocytes. The learning activity then shows students how these immune cells interact to protect us from pathogens.

735475 \$59.95





Stem Cells Poster

What are stem cells? How are they made? Large reference poster features detailed illustrations to facilitate comprehension of key standards-based concepts. Poster is 23" x 35"

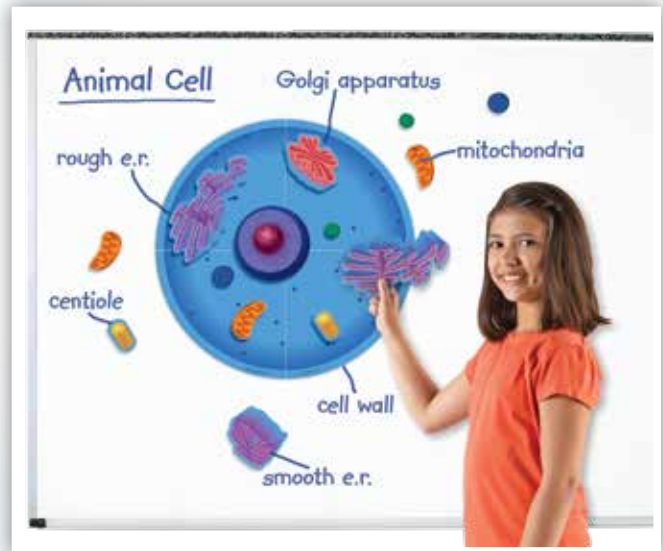
731041 \$34.50



Mitosis & Meiosis Poster

Provides a detailed description of each phase of mitosis & meiosis. Large reference poster features detailed illustrations to facilitate comprehension of key standards-based concepts. Poster is 23" x 35" and is laminated for years of use!

731033 \$34.50



Magnetic Animal Cells

Large 18" diameter magnetic cell. Cell structures are printed on raised foam magnets for a 3-D effect and easy child use. Guide includes detailed information about each component. 18 piece set includes a 4 piece animal cell and 14 3-D organelles.

733538 \$34.50



Similar to other
**NEUPATH LEARNING®
CURRICULUM MASTERY®
FLIP CHART SETS**
featured elsewhere
in this catalogue.

NewPath Learning® Curriculum Mastery® Flip Chart Sets

Introduce and review standards-based Science concepts. The set features 10 double-sided, laminated charts, each 12" x 18" and spiral bound on a durable, free-standing easel. Side 1 of each chart features a graphic overview of topic while Side 2 serves as "write-on/wipe-off" activity chart. Also includes Activity Guide featuring copy-masters and exercises.

**All About Cells Flip Chart Set
731826 \$59.95**

**Mitosis: Cell Growth and Division Flip Chart Set
731830 \$59.95**

**Protists: Pond Microlife Flip Chart Set
731829 \$59.95**



Cells Bulletin Board Chart Set

Each 12" x 18" Chart is laminated and double-sided - Side 1 features a graphic overview of the topic and Side 2 provides "write-on/wipe-off" activities. The Cells Bulletin Board Chart Set includes the following charts:

- The Compound Microscope
- Cells - The Basic Units of Life
- Mitosis
- Osmosis & Diffusion
- Comparing Plant & Animal Cells
- Photosynthesis & Respiration
- Stem Cells

731811 \$39.95



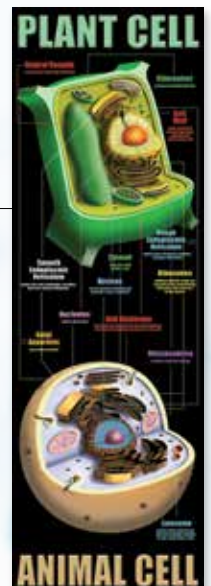
Cell Cycle Game

Engage students in learning basic biological concepts by asking, "How does a normal cell become a cancer cell?" Students first assess cancer risk by creating a narrative surrounding the life choices, family history, and background of a fictional character. Students then calculate the possible mutations that may have occurred in an adult stem cell (game board) of the fictional character based on the outcomes of the narrative. Includes a 28" x 28" canvas game board, 24 Gene cards, 36 Information cards, 5-oz. package of red chips, and a 24-page activity guide.

Plant and Animal Cells Colossal Concept Poster

This striking poster clearly shows the structure of plant and animal cells and explains the function of their important parts. At over 5½ ft. tall, it's sure to capture the attention of young scientists. Includes: poster and teacher's guide with background information and related activities.

732406 \$15.70



BIOLOGY

ANATOMY



Glo Germ™ Kit

Glo Germ™ stands out as the preferred training medium by virtually anyone who teaches proper hand washing techniques. Nearly invisible in ordinary light, Glo Germ™ (fluorescent plastic particles) glows under ultraviolet light. The Glo Germ™ Powder is used to demonstrate cross contamination and surface cleaning. Sprinkle the powder onto the hands, fake a sneeze, and shake hands with several people. Dim the lights and place the UV lamp over the hands and face to reveal how easily germs are spread. To demonstrate surface cleaning, lightly dust a small amount of powder onto a surface, such as a countertop. Clean the surface as you normally would and then pass the UV lamp over the area. Any remaining traces of powder will glow indicating residual bacteria. Kit contains an 8-oz. bottle of oil (approx. 75-100 demos), a 4-oz. bottle of powder (approx. 150-200 demos), LED ultra-violet flashlight, and three "AA" batteries.

732896 \$86.60

Glo Germ™ Powder
77613 \$29.25

Glo Germ™ Oil
77612 \$32.55

Glo Germ™ Gel
77614 \$25.60



Five Senses Poster Set

Stunning, 3-D illustrations and detailed internal cutaways enhance these 10 laminated 17" x 22" posters. Concise text describes the processes involved in sensory reception and interpretation. Sense organs and their parts are clearly labeled. Poster topics: sight, taste, touch, smell, hearing, hearing loss, eye disorders, seeing colour and light, nearsightedness and farsightedness, and an overview of the five senses.

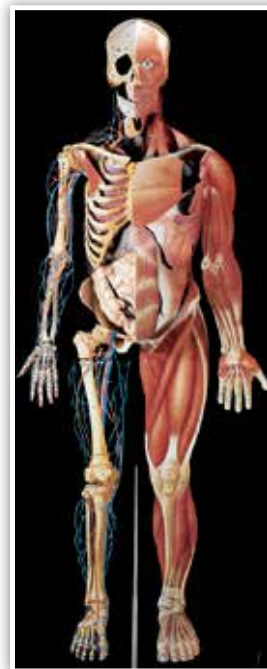
SB35256M \$184.75



Dimensional Man

This life-size, 6-ft. anatomical chart instantly transforms into a 3-D model in minutes. It provides a fascinating introduction to basic human anatomy and reveals the cardiovascular, respiratory, digestive, locomotor, and urogenital systems of the body. Far more than just a useful reference, it's a unique and colourful wall chart that also allows hands-on study. Study various organs closely by unlatching or turning movable parts to reveal inner structures. Includes index identifying 304 bones, muscles, organs, arteries, and veins.

SB22232M \$86.35



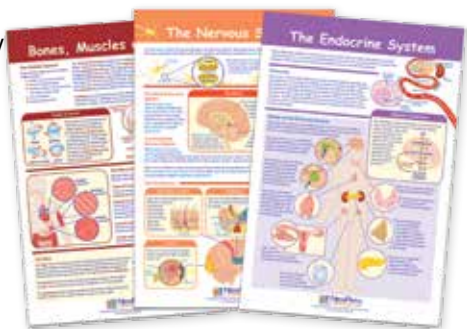
Moving and Controlling the Body/Bulletin Board Chart Set

Each 12" x 18" Chart is laminated and double-sided - Side 1 features a graphic overview of the topic and Side 2 provides "write-on/wipe-off" activities.

Includes the following charts:

- Bones, Muscles & Skin
- Endocrine System
- Nervous System

731814 \$19.95



Providing Fuel & Transportation Bulletin Board Chart Set

Includes the following 4 charts:

- Nutrition
- Circulatory System
- Excretory System
- Respiratory System

731813 \$24.95

Maintaining Life Bulletin Board Chart

Includes the following 2 charts:

- Immune System
- Reproductive System

731812 \$15.95

Stick to Science – Digestion

The kit includes: two large diagrams (the human digestive system and a focus diagram showing connections between digestive organs and their functions), 39 magnetic colour coded cards, a Teacher's Guide and reproducible student worksheets. Magnetic cards describe: anatomical features, chemical digestive agents, digestive enzymes and the hormones responsible for the regulation of digestion. They can be arranged in a variety of ways to clarify the digestive process taught in human physiology and nutrition classes. This set includes 39 magnetic cards 2.3" x 4.7" (6 x 12 cm), liver diagram 7.0" x 4.1" (18 x 24 cm), digestion diagram 7.0" x 18.8" (36 x 48 cm).

730323 \$26.65



Human Small Spine Model with Fold-Out Guide

Small spine model is molded from PVC plastic and hand-painted to show cervical, thoracic, and lumbar regions and sacrum/coccyx. Spine mounts on metal rod with plastic stand. Includes fold-out laminated colour guide indicating 66 labeled structures including the vertebral column, detail of vertebrae, herniated disk, and spine curvature disorders. One side of the guide includes structure names. Other side is numbered for student assessment. Guide rests in a slot molded into plastic base. Also includes a 10-page reproducible study guide.

14" x 5-1/4" x 4".
SB52565M \$175.55



Muscles of the Human Arm Model (7 Parts)

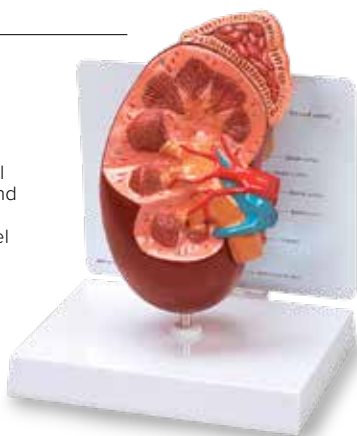
This life-size model shows in great detail the anatomical structure of the arm, complete with superficial and deeper muscles, vascular structures, nerves, and ligaments. The hand and the shoulder are also well represented. The following muscles are removable: deltoid, biceps, triceps, long palmar with radial flexor, brachioradial with radial extensor, and palmar aponeurosis. Mounted on base with stand. 29-1/8" x 7-7/8" x 4-3/4".

LA00129M \$620.85

Kidney Model

Two times life size. Longitudinal section of right kidney and adrenal gland. Model highlights renal artery and vein, major and minor calyx, interlobular artery and vein, and ureter. Size: 4" x 2-1/2" x 6-1/2". Model on base with key card.

WA21315M \$146.15



Food Nutrient Analysis Kit - Lab-Aids® No. 6A

This kit provides pure samples of nutrients referenced in standardized tests. It also has an indefinite shelf life. Allows 30 students to test and identify five classes of nutrients: sugar, starch, lipid, protein, and vitamin. Simple, safe, and quick tests are used.

SB08028M \$224.85



Super Skin Model

A greatly enlarged (105 times!), cross-sectional view of the human skin showing three layers and a close-up view of a hair follicle, sweat gland, fatty tissue, and more. Shows front, side, and back view. Includes a key card with 46 labeled parts. 13" H x 11" W x 4" D model mounted on a stand.

SB22701M \$83.85



Skin Model

Shows the structure of the human skin in three dimension, 70X enlarged. Individual layers of skin are clearly differentiated and anatomical structures such as hair follicles, sweat glands, receptors, blood vessels, nerves, and muscles are shown in detail. Mounted on a 10-1/2" x 7-1/2" board. Model is 11-1/2" x 8-1/2" x 10".

SB49202M \$152.45

Digestive System 3-D Model Making Kit

Make an amazing model of the digestive system! Enjoy learning about the digestive system with our colourful and interactive model. It includes an open channel so you can see clearly how food moves through the digestive system. First, you assemble your digestive system model. Then, use your model to identify the parts of the digestive system including the esophagus, stomach, small intestine, large intestine, gallbladder and pancreas. You can then look at how food passes through the digestive system. The Model Making Kit includes enough materials for students to assemble up to 10 paper models working cooperatively. The comprehensive Teacher Resource Guide included provides illustrated readings, activities, key vocabulary and an assessment.

735473 \$49.50



The Human Body

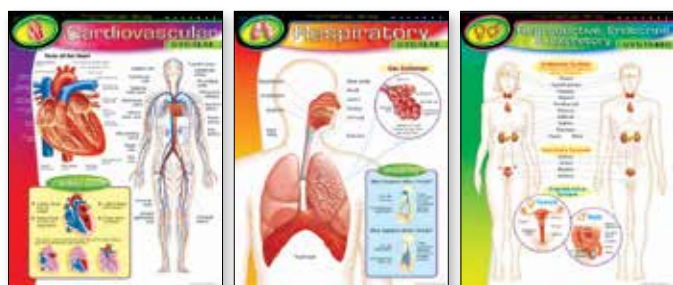
Learn about the human body by doing experiments with your five senses. By exploring the body, outside, you can learn a lot about your anatomy, inside. Relate your experiments back to human body systems, including the internal organs, skeleton, muscles, and the circulatory system, with clear and accurate anatomical illustrations. With a 48-page, full-colour illustrated guidebook, this kit teaches human biology fundamentals with step-by-step, hands-on experiments.

730716 \$54.50



BIOLOGY

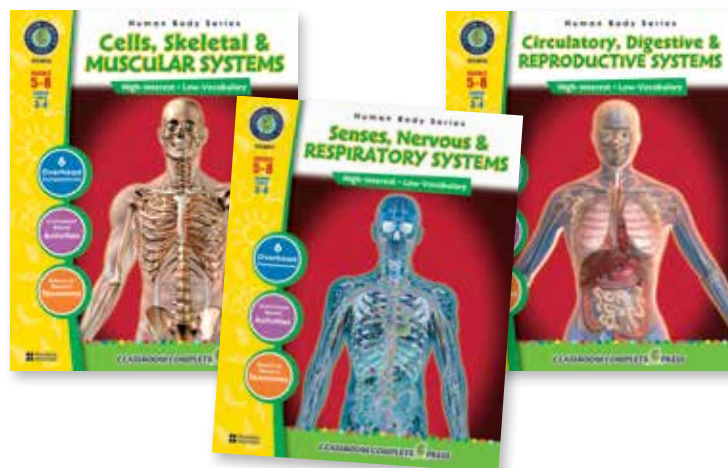
ANATOMY



The Human Body Chart Combo Pack

Convenient chart pack makes teaching about the human body easy. Topics include: nervous system, skeletal system, reproductive, endocrine, excretory systems, respiratory system, cardiovascular system, muscular system, and digestive systems. Each durable chart features reproducibles, study tips, and teaching information. Includes seven 17" x 22" charts.

77248 \$35.50



Human Body Series

We start off with an in-depth study of both the muscular and skeletal systems. Then we investigate the organs of the five senses, along with the respiratory system! We finish with a look inside the kidneys and intestines, and learn how a tiny sperm and egg cell can grow into a baby. Using simplified language and vocabulary we then explore the major organs of four body systems and how they work to keep us alive and healthy. Each book is 60 pages.

Human Body Big Book

(All 3 books combined)

731058 \$27.30

Cells, Skeletal & Muscular Systems

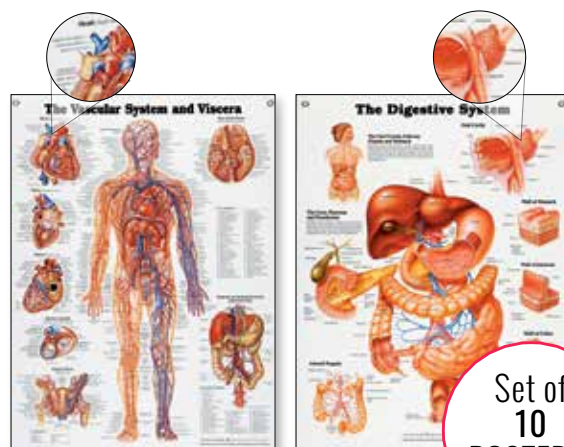
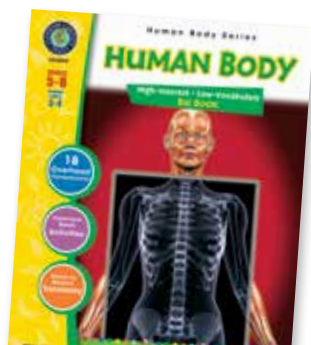
731052 \$13.65

Senses, Nervous & Respiratory Systems

731054 \$13.65

Circulatory, Digestive & Reproductive Systems

731056 \$13.65



Set of
10
POSTERS!

Peter Bachin Anatomical Chart Series

Masterpieces of anatomical art lithographed in four colours. Striking 3-D effects make this series outstanding. Subject matter is presented in a refreshing style with nomenclature located directly on each chart. Charts are heavily laminated to prevent yellowing and soiling. Water-soluble markers should be used on laminated charts to avoid damage. Mark on them — wipe clean. Includes: eyelets in each top corner for convenient wall mounting. Set of 10 charts includes Skeletal System, Muscular System, Vascular System and Viscera, Nervous System, Lymphatic System, Male Reproductive System, Female Reproductive System, Digestive System, Respiratory System, and Endocrine System. 26" x 20".

SB25037M \$325.25

Human Body Study Card Set

Standards-based review cards provide a comprehensive review of 25 key topics with 30 questions each - a total of 750 self-correcting, illustrated study questions. Detailed coverage of the following topics:

- The Science of Biology
- Diversity of Life
- Cells: The Basic Units of Life
- Cell Structure & Function
- Cell Processes
- Cells, Tissues & Organs
- Cell Reproduction
- Genetics - Study of Heredity
- DNA Technology
- Evolution & Classification
- Modern Genetics
- Bacteria & Viruses
- Invertebrates I
- Invertebrates II
- Bones, Muscle & Skin
- The Digestive System & Nutrition
- Circulation & Immunity
- Respiration & Excretion
- The Nervous System
- The Endocrine System & Reproduction
- Genetics & Heredity I
- Genetics & Heredity II
- Human Biology
- Human Biology II
- Lab Investigations

731028 \$94.50



Curriculum Mastery® Flip Chart Sets

The set features 10 double-sided, laminated charts, each 12" x 18" and spiral bound on a durable, free-standing easel. Side 1 of each chart features a graphic overview of topic while Side 2 serves as "write-on/wipe-off" activity chart. Also includes Activity Guide featuring copy-masters and exercises.

Human Body Flip Chart Set

731841 \$59.95

Chromosomes, Genes & DNA Flip Chart Set

731827 \$59.95

Human Body I: Moving and Controlling the Body Flip Chart Set

731842 \$59.95

Human Body II: Providing Fuel and Transportation Flip Chart Set

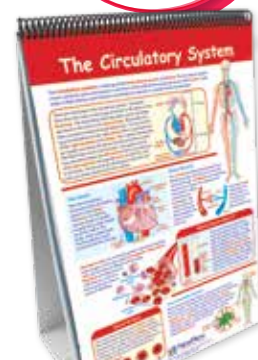
731843 \$59.95

Human Body III: Maintaining Life Flip Chart Set

731844 \$59.95

Life Science Flip Chart Set

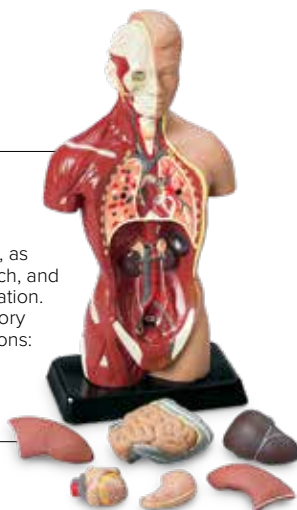
Similar to other
NEUPATH LEARNING®
CURRICULUM MASTERY®
FLIP CHART SETS
featured elsewhere
in this catalogue.





**Half-Size
Genderless Torso**
50 x 20 x 12cm
48408 \$256.78

**Quarter-size
Genderless Torso**
25 x 13 x 6cm
48406 \$120.50



Human Torso

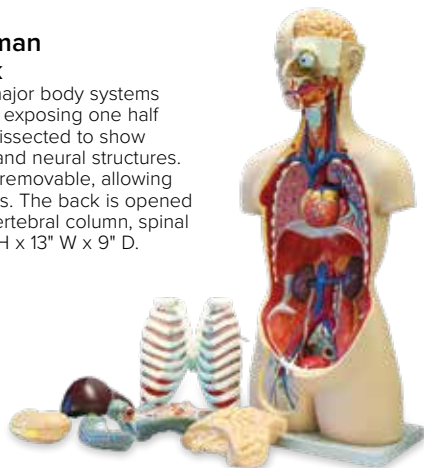
The six-part plastic torso shows the respiratory, circulatory, digestive, nervous, and urinary system, as well as musculature. The lungs, heart, liver, stomach, and intestines are easily removable for further examination. This compact, durable model is ideal for introductory biological science classes. Key included. Dimensions: 10" x 5-3/10" x 3-1/5".

SB25196M \$97.85

Economy Sexless Human Torso with Open Back

This 17-part torso shows the major body systems in detail. The head is opened, exposing one half of the brain, and the neck is dissected to show muscular, glandular, vascular, and neural structures. The thorax and abdomen are removable, allowing easy observation of the organs. The back is opened and dissected, showing the vertebral column, spinal cord, and nerve endings. 34" H x 13" W x 9" D.

SB48432M \$908.25



Human Torso

This torso includes exact replicas of the organs of the body, including the: right and left lungs, heart, stomach, liver, intestines, and half of the right kidney. Organs are held in place by means of hooks, eyes, and metal pegs. The head is removable; half of the brain is removable to show a sagittal section of that organ. Heart can be removed, as well as a portion of each lung, the liver, stomach, and pancreas (including a portion of the duodenum). The right kidney is separate, and is sectioned to show internal anatomy. The intestinal mass comes out in one piece. A total of 20 parts are removable. Constructed of plastic and mounted on a plastic base, the entire model measures 33-1/2" H x 9-7/8" W x 14-9/16" L.

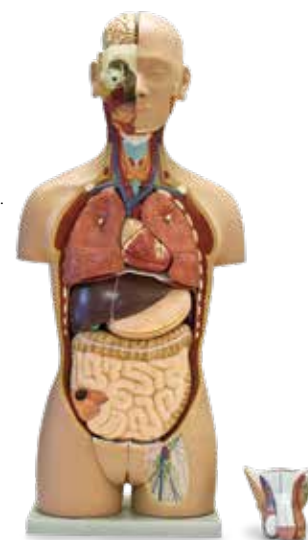
SB25195M \$395.85



Dual-Sex Human Torso with Open Back (27-Part)

Life-size torso has 27 removable parts featuring exchangeable male and female reproductive organs. Major body systems are shown in detail. The head opens exposing one half of the brain, and the neck is dissected to show muscular, glandular, vascular, and neural structures. The cerebellum and lungs can be completely removed to show the important structure of the head and inner wall of thoracic cavity. Thorax and abdomen are removable, allowing easy observation of the internal organs while the back is opened and dissected showing the vertebral column, spinal cord, and nerve endings. Further examination of the spinal cord is also possible with the removal of the 12th thoracic vertebrae. Unit measures 36" x 17" x 11".

SB49199M \$1,250.00



Double-Sided Magnetic Human Body

Twice the life-science learning—skeletal system on one side and major organs and muscle groups on the other! Realistically detailed pieces combine to create a body over 3'H! Great for demonstrations, centers and more. Includes 17 magnetic pieces and multilingual Activity Guide with reproducible diagrams.

733600 \$40.50



Lung Model

Teach students about lung function. Pull down on the diaphragm of this working model and watch the balloon lungs inflate.

57038 \$71.95

Alternative model on pg. 31



BIOLOGY

ANATOMY

4' Skeleton Floor Puzzle

Kids learn all the major bones as they assemble this unique soft foam puzzle. Great for playtime, this large 15 piece puzzle is 4' tall when assembled, making it life-size for kids. Once assembly is complete, have children lie on top of it so they can see where the major bones are in their own bodies! Each puzzle piece is labeled on reverse side.

78566 \$48.50



Human X-Rays

18 real x-rays printed on clear, heavy duty plastic. Perfect for use on light tables. Up to 20 x 25cm. Includes idea guide.

79330 \$46.80

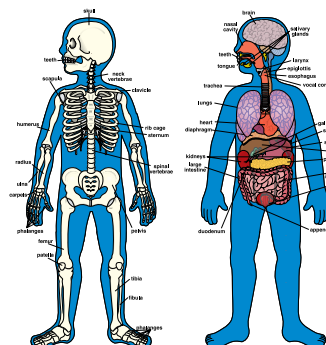
Classroom FAVOURITE



Skeleton Models

42 cm. These skeletal models fit into any classroom budget. Made of moulded plastic with a varying range of articulation. Bones are cast in a natural colour with anatomical details. All movable parts are joined by connectors and allow movement around the joint complex.

48412 \$42.50



Child-Size Human Body

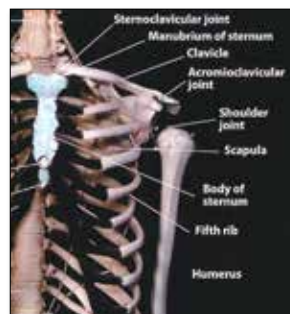
Bulletin board contains two figures, 127cm tall, with labeled skeletal system and body parts, and 6-page resource guide.

62820 \$18.80

Human Skeleton Photo

Front view of the human skeleton with major bones and joints identified. The photograph is 54" tall. Comes rolled in a protective storage tube.

SB28462M \$33.45



Broken Bone X-rays

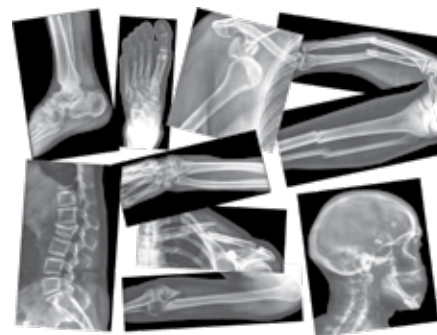
Real x-rays of the most commonly broken bones. Hold up to the light or use on a light table. Includes: 15 X-rays and teaching guide.

731921 \$39.50

Fixed Bone X-rays

Authentic x-ray images show the hardware used to fix broken bones. Fourteen additional images of the fractures, printed on card-stock, correspond to the x-rays of the repairs.

731919 \$40.70



Dental X-Rays, Set of 15

Provides excellent examples of the benefits of good dental habits and the consequences of bad ones. See for yourself the importance of wearing protective mouth gear when playing sports, and how tooth injuries can lead to painful, even dangerous, infections. See how the development of healthy teeth progresses from young children to young adults, and how sometimes it is necessary to correct crowded teeth with braces.

731918 \$36.50



Height
33"



Economy 33" Skeleton

This economical teaching skeleton is wired for natural movement and features a removable skull with the calvaria cut. Miniature springs hold the mandible in place to demonstrate TMJ problems. Tiny screws hold arms and legs in position so you can bend the extremities in all directions. All the bones are molded individually, except in the hands and feet. Although the basic appearance and functional value of this skeleton is excellent, there may be flaws in the construction (such as rough plastic, protruding wire, chipped paint, etc.). All hardware on the skeleton is stainless steel.

SB22564M \$129.45

Height
5' 5"



American 3B Advanced Skeleton with Muscles

Same model as SB02011M, but with paintings of muscle origins in red and muscle insertions in blue. All muscle numbers are easily identified. The muscles are accurately painted at the correct positions under the supervision of anatomists. Supplied with dustcover. Mounted in an upright position on a movable base. Supplied with key card.

SB14901M \$1,450.00

Height
5' 6"



Full-Size Flexible Skeleton with Muscle Insertions

Flexible spine can bend to mimic natural human movement. Arms and legs are removable for further study. All movable parts are joined by connectors that allow movement around the joint. Hands and feet are wire mounted to demonstrate their natural position. The skull features a movable jaw, removable skull cap, suture lines, and a full dentition. Bones are cast individually from natural-coloured plastic with anatomical detail. Comes pelvic mounted on a roller base and supplied with a diagram.

Height
5' 6"



"Fred" The Flexible Skeleton

The spinal column on this skeleton model is specially designed and constructed to be flexible, allowing natural movements and pathological conditions to be demonstrated. All skull movements at the neck joints can be demonstrated. Tooth position and spacing are accurately depicted. Spinal nerve exits and vertebral arteries are also shown, along with dorso-lateral disc prolapse between the 3rd and 4th lumbar vertebrae. This human skeleton model is cast from a natural, real bone skeleton. It is handmade from durable, unbreakable plastic. Anatomical details such as fissures, foramina, and processes are accurately shown. It features a three-part skull (skullcap, skull base, and lower jaw) and removable arms and legs. Comes with roller stand and dustcover.

SB27618M \$1,290.80

Height
17"



Desktop Skeleton

An economical, 17" skeleton that is ideal for individual or classroom study. Constructed of unbreakable plastic, it features a mobile jaw on springs, removable arms and legs, a skull that is cut and removable, and a black plastic display stand. Includes key card.

SB22563M \$46.50

Dust Cover for Skeleton

Zippered, heavy-duty dust cover can be used to protect full-size skeletons (both hanging and pelvic mounted). Blue fabric with transparent window. Fabric imported.

SB51049M \$41.55

Skeleton Dust Cover

Protect your investment with this heavy duty protective cover. Suitable for all full-size skeletons and stand versions. Black in colour with transparent window.

SB45480M \$139.95

Height
5' 7"

Best
SELLER



Human Skeleton

All of the realism of an actual skeleton has been captured in the process used to mold these durable and functional teaching aids. An ideal skeleton was selected and used in preparing the production mold for the skeleton materials, and the bones were carefully cast to preserve even the finest details. Skeleton is mounted in an upright position on a nonrusting stand with base and rollers. Each bone is cast individually in natural colour with all details of anatomy represented.

Wherever possible, there is natural movement in the joints. Legs, arms, and skull are removable. Mandible hinged with springs, calvarium sectioned to permit study of the cranial vault. The skull has a full set of teeth, three which are removal for closer examination. This reproduction of a natural skeleton is made of special unbreakable plastic which does not deteriorate with age. It can be easily washed with soap and water for years of continuous use.

SB02011M \$465.75

Height
5' 6"



Human Skeleton

This economical, life-size articulated adult plastic skeleton is ideal for teaching the basics of anatomy when intricate textural nuances of the bone are not required. The arms and legs are removable for study. Features nerve branches, vertebral artery, and herniated lumbar disk. Skull includes movable jaw, cut calvarium, suture lines, and three removable lower teeth. Mounted on a sturdy 16" W x 3" H metal base. Complete with dust cover and skeletal system chart. Includes key card with 155 structures identified.

SB25209M \$870.50



BIOLOGY

ANATOMY

Large Brain Model

This life-sized human brain represents a right-handed person. Colour coding and hand-lettered captions locate and identify motor and sensory functional centers with emphasis on the intellectual role of the left brain and the creative role of the right. Key structural features are identified and correspond to a manual for easy learning.

9" x 8" x 11-13/16".
SB48436M \$419.05



Life-Size Brain with Arteries

This model shows a median brain section, each part being dissectible into frontal-parietal lobes, temporal-occipital lobes, cerebellum, brain stem, and hypophysis. Life-size model mounted on base. Nine parts.

LA00239M \$372.45



Clear Human Jaw with Teeth

Full-size hinged clear cast jaw allows viewing of roots. Healthy side shows normal dentition and occlusion. Affected side shows multiple pathologies, including super eruption, apical alveolar abscess with caries, periodontal disease, lateral abscess, abfraction, irregular root curvature, impacted canine, erosion, fractured tooth, horizontal impact, radicular pulpitis, root canal with crown, internal resorption, attrition, external resorption of root, implants, and fractured root. Model size: 3-12" x 2-3/4" x 2-1/2". Includes 6-12" x 5-14" education card.

SB48717M \$213.35



Numbered Human Skull Model

A detailed 3-part reproduction of a life-sized human skull with all structural details. The skullcap is removable to show internal details. The mandible is articulated and removable. All of the joints, sutures, fissure, foramina, and processes are portrayed with utmost accuracy. Significant structures are numbered. 8-5/8" x 5 1/2" x 6 1/4".

LA00176M \$169.35



Half Brain Model

Demonstrates sensory/motor functions of the brain. Normal right half brain features: frontal, parietal, occipital, and temporal lobes; cerebellum; interthalamic adhesion; corpus callosum; pons; midbrain-central peduncle; olfactory bulb; optic nerve; optic chiasm; mammillary body; and medulla oblongata. Model size: 6 1/2" x 5" x 2 1/2". Card Size: 6 1/2" x 5 1/4".

SB40235M \$125.25



4-D Human Anatomy Head Model

Build your own human anatomy model of the human head! This exceptionally detailed, 4.5" model contains 14 detachable, hand-painted medical education-quality organs and parts and display stand.

733815 \$52.80



Soft Foam Cross-Section Human Brain Model

Teaching students about the complexities of the human brain is easy with this labeled cross-section model. One half is labeled with parts of the brain and the other has letters for testing purposes. Activity guide included. 12.7cm diameter.

79830 \$34.00



Economy Human Skull

This plastic, life-sized human skull is designed to meet your budget and your objective for introductory anatomy studies. The 18th left mandibular molar, 22nd left mandibular canine, and 24th left central incisor are removable to show the tooth roots. Spring-mounted mandible and sectioned calvaria are detachable. Measures 5-1/2 in. x 8 in. x 6 in.

SB25937M \$91.85



Eight-Part Human Brain Model

Full-size human brain molded from PVC plastic and hand-painted to show lobes. Mounted in a rotatable metal harness on a plastic stand, the brain can be removed and dissected into eight anatomically correct parts. Includes over 50 labeled structures of the brain and a fold-out laminated colour guide indicating brain structures. One side of the guide includes names, while the other side shows only numbers for student assessment. Guide rests in a slot molded in the plastic base.

CB54230M \$224.45



Life-Size Heart Model

A life-sized heart that can be removed from its base and split in two parts. Good visibility of the chambers, valves, and great vessels. 6-1/4" x 3-1/2" x 3-1/4". Key included.

SB25200M \$47.35

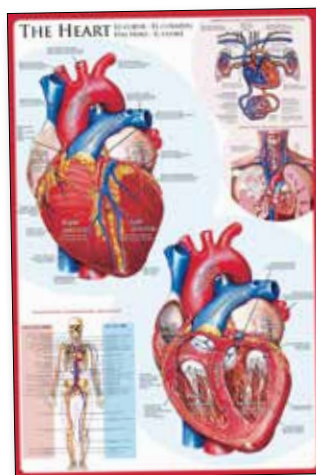


Heart Model

Two-piece model opens in half to show inner chambers and valves of the heart as well as aortic arch, superior and inferior vena cava, and pulmonary and cardiac veins. Model mounted on stand includes information card.

Model size: 3 3/4" x 4" x 4 1/4".
Card size: 6 1/2" x 5 1/4".

SB32595M \$252.35



Heart Poster

The anatomy and physiology of the human heart is colourfully and accurately depicted in this anatomical chart. A great teaching aid for lessons on the human heart and the human circulatory system. 24" x 36". Laminated.

SB47801M \$32.85

Life/form.

Human Heart

This model can be opened to allow inspection of the chambers and the valves. The texture of the heart, both inside and out, has been duplicated with remarkable realism. By squeezing the heart, students can actually feel that the ventricles are thicker than the atria. To see the valves and ventricular chambers, simply flip the cardiac skeleton forward. Students can also use the replica to identify all of the large vessels entering and leaving the heart. A teaching guide is included.

LF00964M \$341.55



Human Heart Walk-Thru

You can instruct and quiz your students by literally walking the path of blood through the heart. The Human Heart Walk-Thru mat measures 50" x 60" and comes with a convenient storage bag.

732300 \$50.35



Soft Foam Cross-Section Human Heart Model

This human heart model separates to create a cross-section view for hands-on classroom demonstrations. The interior is labeled with the parts of the heart. Activity guide included. 12.7cm diameter.

79828 \$34.00



Life-Size Human Heart

Can be removed from the plastic base and split into two parts to expose the chambers, valves, and great vessels.

15374 \$48.25



Nasco Heart Game

Designed for 2 to 6 individual players or teams, the Heart Game reviews cardiac anatomy and physiology. The game helps students learn the basic principles of cardiac assessment; how to correlate diagnostic data to anatomy and physiology; trace circulation of blood; identify the anatomical components and normal regulatory mechanisms of the heart; and identify normal electrical conduction of impulses through the heart. The object of the game is to collect the most points by answering Question Cards correctly, and reach the end of the game board first. The game includes a game board (indicating normal flow of blood through heart), six tokens, one die, 108 Question Cards, and an instruction and answer key booklet.

SB06772M \$42.85

Pumping Heart Model

Easy-to-use, multi-sensory model uses a simple hand pump to demonstrate basic heart and pulmonary blood flow. Create a memorable exploration of how the heart and lungs work together for oxygen exchange. Includes clearly labeled heart chambers, main artery, veins and lungs, plus Activity Guide. Heart measures approximately 12"L x 11"W x 5"D.

733598 \$68.90



BIOLOGY

ANATOMY

Snellen Eye Examination Chart

A wall chart for routine eye tests for visual acuity. Designed for student use at a distance of 20 feet. Size: 11" x 22".

SB16711M \$14.75



Human Eye Model

Oversized fully assembled model with cut-away to show inner anatomy. Lens and cornea are removable. 3¾" x 2½" x 2¾" without base. Card size: 6½" x 5¼".

SB27236M \$120.95

Classic Eye

Enlarged approximately three times. Dissectible into six parts. 6" H x 4" W x 4" D on stand. Teacher's guide included.

SB19256M \$201.15



3D Giant Eye Model

An eye model that is five times life size and may be dissected into six parts. The upper half of the sclera with cornea and eye muscle attachments, both halves of choroid with iris and retina, lens and vitreous humour are removable. Comes on a base with key card. Dimensions: 8½" H x 4¾" W x 4¾" D.

SB27614M \$302.75



Cross Section of Human Eye

Size: 12.7cm in diameter when two halves are put together. One side is labeled with parts of the eye the other side is labeled with letters for review. Included: Cornea, iris, pupil, retina, lens, optic nerve, vitreous humor, sclera, choroids, macula, ciliary muscle, and optic disc.

731062 \$33.80



Giant Hands-On Eyeball

Six times larger than life, with five detachable parts, it's plain to see why this giant, take-apart eye generates such student enthusiasm. Lucite® lens, which your students will discover, actually magnifies objects and forms inverted images. Next, they'll find that they can see through the transparent, vitreous body. After they remove the vitreous body, they'll discover the light-sensitive retina. Hand-numbered, the eyeball is accompanied by a two-page study guide detailing the purpose and function of its 19 principal features. Mounted on a tip-proof wooden base, the unit measures 6" x 6" x 6".

SB31473M \$365.75



4-D Anatomy Ear Model

Build your own human anatomy model of the ear! This exceptionally detailed, 4.5" model contains 22 detachable, hand-painted medical education-quality organs and parts and display stand.

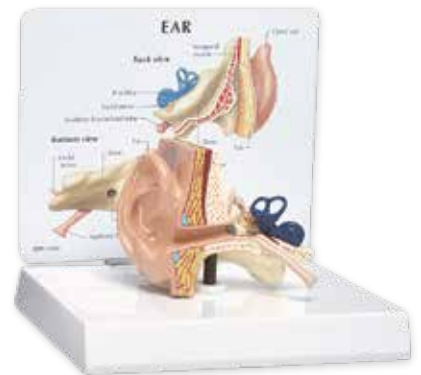
733811 \$37.45



Human Ear 3-D Model Making Kit

Have fun teaching the structure of the ear and how hearing works! You can follow how sound waves move into the ear and how these are turned into something the brain can detect. Students make their ear model using the colourful parts working alone or in small groups. They use their model to identify the parts of the ear including the main parts of the outer ear, middle ear and inner ear. It includes optional skin tones so students can personalize their model. The Model Making Kit includes enough materials for students to assemble up to 10 paper models working cooperatively. The comprehensive Teacher Resource Guide included provides illustrated readings, activities, key vocabulary and an assessment, along with teaching opportunities for students.

735474 \$44.95



Human Ear Model

Fully assembled, full sized model shows canal and inner ear mechanisms. 3¾" x 2½" x 2¾" without base. Card size: 6½" x 5¼".

SB32980M \$124.05



3D Human Ear

Enlarged approximately three times. Dissectible into four parts. Removable ear ossicles with dissectible cochlea. 13-1/3" x 6-1/4" x 7-2/5" on base. Teacher's guide included.

SB19254M \$240.65



SPIKERBOX KITS

Introduce students to the world of electrophysiology with exciting, hands-on experiments!

Heart and Brain SpikerBox Kit

- Listen to, record and display live bioelectrical signals on a smartphone, tablet, or laptop
- Pro kits offer USB connectivity, 2 recording channels, sounds loud enough for the classroom, 5 time stamp markers, and 2 analog inputs for recording lab devices
- View and record the action potentials of your heart and the slow rhythms of your brain
- Perform experiments which reveal the relationship between your heart and nervous system
- Learn about how your brain processes sight by recording from the vision center of your brain

SB52866M \$280.65



Healthy Eating Shopping Bags Game

Learn all about healthy eating and the Eatwell Guide with this fun shopping game. The front of each card has a real life photo of a piece of food and the reverse side is coloured to match the shopping bag with the correct food group. Teachers lay the cards on a flat surface, image side up. Children have to identify the image, select the correct food group and turn over the card to see the answer. They then put it into the correct shopping bag. Teaches healthy eating, food and nutrition.

735690 \$49.50

Magnetic Healthy Food

Beautifully illustrated foods feature the main food groups. Set comes with 33 magnetic pieces, write-on/wipe-off magnetic placemat, menu pad, and suggested activities.

34312 \$43.95



First Nations, Inuit and Métis Canadian Food Clings Kit

You can position the clings on the bilingual circle chart in food groups, or use them to show appropriate daily food intake. With the two place mats provided, arrange the clings to illustrate meals. Foods cling to the place mats and circle chart, and can be repositioned and used over and over again. In all, there are 49 food clings, so several meals can be constructed at one time. Have teams construct meals and then evaluate the pros and cons of each to determine the healthiest meal. Kit includes: 84 cm x 55 cm circle chart, 48 cm x 28 cm place mats and 49 food clings.



MyPlate Food & Nutrition Flip Chart Set - Elementary

The colorfully illustrated charts provide students with an engaging means to understand the food groups and the importance of making healthy lifestyle choices. Each 12" x 18" chart is laminated, double-sided and spiral-bound on a sturdy, free-standing easel. One side features self-directed readings and easy-to-follow graphical explanations while the reverse provides "write-on/wipe-off" exercises for review and reinforcement.

Set includes the following 10 charts:

- Food Nutrients
- Choose MyPlate
- Fruits Food Group
- Vegetables Food Group
- Protein Food Group
- Grains Food Group
- Dairy Food Group
- Oils & Fat
- Healthy Snacking
- Making Healthy Choices

735699 \$59.50

MyPlate Food & Nutrition Flip Chart Set - Middle School

The colorfully illustrated charts provide students with an engaging means to understand the food groups and the importance of making healthy lifestyle choices.

Set includes the following 8 charts:

- Food Nutrients
- Choose MyPlate
- Fruits Food Group
- Vegetables Food Group
- Protein Food Group
- Grains Food Group
- Dairy Food Group
- Oils & Fat

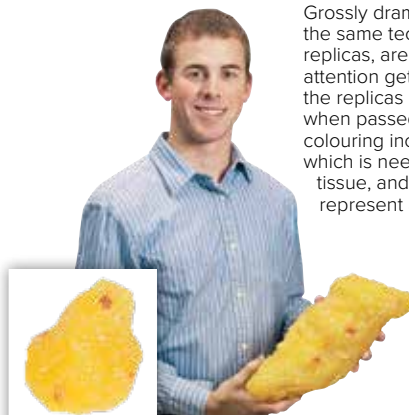
735700 \$59.50

Life/form® Body Fat Replicas

Grossly dramatic replicas of human fat, molded with the same techniques used to create Life/form® food replicas, are a shocking but strongly motivating attention getter. Made of soft, pliable, vinyl plastic, the replicas have a profound memorable effect when passed around among the audience. Realistic colouring includes a simulated vascular system which is needed to support the extra adipose tissue, and adds strain to the heart. All replicas represent accurate weight and volume.

**1-lb. Fat Replica
WA14533M \$84.75**

**5-lb. Fat Replica
WA04313M \$112.75**



BIOLOGY

PHYSIOLOGY



Student Blood Pressure Kit

The perfect blood pressure kit for students. The kit includes: long-lasting cotton D-ring cuff; convenient one-hand operation; gray, no-stop pin, 300mmHg gauge; and professional stethoscope attached to cuff. Comes with vinyl carrying case, illustrated instructions, and blood pressure chart. One-year warranty. 7.75" x 4.25" x 4".

730310 \$34.50



Aneroid Sphygmomanometer

Used for measuring blood pressure, this device is individually certified for accuracy. 300 mm scale. Inflation system is made of seamless, reinforced latex rubber. hook-and-loop cuff. In leather like zipper case. 1-year warranty on unit, lifetime warranty on gauge if not abused. Fabric imported.

SB34978M \$39.95



Teaching Sphygmomanometer Set

Designed as an instructional set. Includes a dual-head teaching stethoscope plus a popular aneroid sphygmomanometer. To be used for simultaneous listening by teacher and student or two students. Excellent device for assisting students in the detection of systolic and diastolic heart sounds.

SB27332M \$50.75

Stethoscope

06900 Black \$12.70



Teaching Stethoscope

Bowles disk chest piece gives excellent amplification of heart and Korotkov's sounds. Dual head sets of chrome-plated brass binaurals and "Y" tubing connector and extension tubing.

SB15276M \$23.65



Percussion Hammer

An 8" long percussion hammer with a molded rubber head permanently joined to the chrome-plated handle.

SB06920M \$8.25



Fingertip Pulse Oximeter

A simple, easy-to-use fingertip pulse oximeter that measures blood oxygen saturation level and heart rate in seconds. Features one-button operation, low power consumption, and auto power-off function. Comes with two "AAA" batteries, a neck/wrist cord, and user manual.

SB48022M \$49.75

Effects of Smoking Kit

This kit demonstrates the amount of tar and nicotine produced by cigarettes. The experiments draw smoke through a high efficiency fiberglass filter which collects the tars and nicotine. Kit includes 25 filters, molded plastic lid (cigarette holder) and base, aspirator bulb, colour chart for determination of tar content, and instructions for 5 complete experiments. Cigarettes not included.

731064 \$75.55

731066 Refill of 25 filters \$27.05



Giant Dental Care Model

Made of hard plastic. 2x full size. Comes with a giant tooth brush.

67686 \$63.75



9-Litre Student Wet Spirometer

An academic-quality, highly accurate wet spirometer that combines reliability and accuracy with an increased volume to accommodate students with larger lung capacities. Specifically designed to meet the needs of today's physiology educators. Five different respiratory volumes can be determined from measurements obtained: tidal volume, inspiratory capacity, inspiratory reserve volume, expiratory reserve volume, and vital capacity. Features: large, easy-to-read scale graduations; larger-than-normal 9-liter capacity; disposable mouthpieces and one-way plastic valve for sanitary classroom use; and is easy to transport and store.

SB31479M \$1,215.00



Human Senses (Physiology) Experiment Kit Lab-Aids® No. 8

This lab activity arouses a personal interest as students experiment to identify response areas of their body, and become aware of their sensory perception. Students "map" the taste sensation of sweet, salty, bitter, and sour; determine their olfactory fatigue and recovery times by inhaling different odors; actually discover that there are different nerve endings for hot and cold as they "map" a section of skin; locate nerve endings for touch (pressure) and pain, as well as determine the two-point threshold of various regions of their bodies; investigate the blind spots, dominant eye, visual accommodation, near point of vision, and afterimage; and experiment with reflex actions. Complete for 30 students.

SA01213M \$215.45

Breathe Easy Respiratory System Kit

Packed with activities to enhance any curriculum or unit on the respiratory system, with this kit students will learn all the primary parts and functions of the system that helps us breathe. They will be able to describe the function of mucus, understand the diaphragm, the respiratory rate, what affects it, and more!

SB51905M \$58.15



Lung Demonstration Apparatus

This device uses a bell jar to represent the thoracic cavity, a rubber dam as the diaphragm, a Y-shaped tube as the trachea and bronchial tubes, and two balloons as lungs. Manipulation of the diaphragm causes the balloons to inflate and deflate. Light-weight, break-resistant plastic bell jar may be handled safely by the entire class.

S07746M \$89.35

Replacement Rubber Dam.

SB19150M \$12.45



Digital Spirometer

This digital spirometer duplicates the performance of professional instruments by quickly and accurately measuring lung volume. The large, easy-to-read digital display gives instant volume readouts. No more lengthy volume calculations that may affect results or take up time. A nice addition to human physiology, anatomy, and health class units. Includes AC adapter and 50 disposable mouth pieces; can also run on two "AA" batteries (not included).

SB45890M \$1,009.50



Lung Volume Bag Kit

Measure lung capacity with this durable, silk-screened plastic bag, calibrated to six liters, with accompanying mouthpiece and holder. Shows the relationship of body size to lung volume. Contains four lung bags, four mouth pieces, four mouth piece holders, and four rubber bands. Instructions included.

SB06915M \$50.35

Disposable Lung Mouth Tubes.

Pkg. of 100.

SB15812M \$22.05



BIOLOGY

DISSECTION SUPPLIES



Dissecting Forceps (Fine Points) - Straight, Stainless Steel

4-1/2 in. fine points straight forceps with guide pin.
SB12628M \$2.55 ea.



Dissecting Forceps (Fine Points) - Curved, Stainless Steel

4-1/2 in. fine point curved forceps with guide pin.
Serrated points.
SB12629M \$3.25 ea.



Dissecting Forceps (Medium Points) - Straight, Stainless Steel

4-1/2 in. straight forceps with guide pin. Serrated points. Superior grade.
SB15410M \$2.95 ea.



Dissecting Forceps (Medium Points) - Curved, Stainless Steel

4-1/2 in. curved forceps with guide pin, serrated points. Superior grade.
SB15425M \$3.25 ea.



Tissue Forceps

Stainless steel forceps with 1 x 2 teeth. Superior grade.
5 1/2" Long
SB15411M \$2.75 ea.



Microdissection Forceps, Stainless Steel

4 1/2" very fine, extra-long points. Designed for dissection under the microscope.
SB12630M \$5.65 ea.



Forceps

4 1/2", fine points with serrated inside tips. Chrome plated.
SA01133M \$2.95 ea.



Thumb Forceps

Stainless steel. Popular forceps. 5 1/2" long.
SA04467M \$2.75 ea.



Plastic Forceps

Fine point plastic forceps with serrated inside tips. 4 1/2" long.
75780 \$0.95 ea.



Plastic Forceps

Give your students a precision grip to make dissection easier. Blunt tip. Yellow. 4".
SB48152M \$1.05 ea.



Specimen Forceps

A 12" chrome-plated forceps with straight, blunt serrated points with guide pin.
SB10273M \$6.05 ea.



Halstead Mosquito Forceps

5" stainless steel, serrated box joint. Superior grade.
SB15412M \$2.95 ea.



Probe and Seeker

Mall probe 6" long. Solid steel, chrome-plated. Angular, semi-blunt tip. 6 mm dia. Hexagonal handle.
SB07838M \$1.55 ea.



Probe and Hook

Hooked knife and sharp point. Nickel-plated. Overall length 6".
SB10281M \$3.55 ea.



Plastic Handle Teasing Needle

Straight. Pkg. of 12.
S08847M \$5.55 pkg.

Wood Handle Teasing Needle

Straight. Pkg. of 12.
SB15414M \$5.45 pkg.



Dissecting Scissors

4½" Stainless Steel,
Straight.

Fine Point.
SA01146M \$3.35 ea.

4½" Chrome, Straight,
Fine Point.
SA01145M \$4.15 ea.



Iris Research Scissors

Stainless steel scissors with
sharp points. 4½" long.

Straight Blades.
SB06901M \$4.25 ea.



Surgical Scissors Both Points Sharp

Stainless steel scissors with
sharp points. Superior grade.

4½" Straight.
SB15417M \$2.95 ea.

5½" Straight.
SB10282M \$3.35 ea.

6½" Straight.
SB15406M \$4.45 ea.



Angular Iris Scissors

4½" stainless steel, fine point.
Superior grade.

SB15404M \$5.65 ea.



Surgical Scissors One Point Sharp/ One Point Blunt

Stainless steel scissors with
sharp/blunt points.

4½" Straight.
SB15420M \$3.90 ea.

5½" Straight.
SB10283M \$4.20 ea.

6½" Straight.
SB15408M \$4.70 ea.



Surgeon's Handle No. 3

A No. 3 stainless steel surgeon's handle for Nos.
10, 11, 12, and 15 surgeon's blades.

SB06903M \$2.85 ea.

Surgeon's Handle No. 4

A No. 4 stainless steel handle for Nos. 20, 21, 22,
23, and 24 surgeon's blades.

SB07833M \$4.45 ea.



Surgical Scalpel Blades

Pkg. of 10 \$3.15

SB09342M No. 10 SB09347M No. 21

SB09344M No. 12 SB09348M No. 22

SB09345M No. 15 SB09349M No. 23

SB09346M No. 20

Box of 100 \$23.15

SB09351M No. 10 SB09356M No. 21

SB09353M No. 12 SB09357M No. 22

SB09354M No. 15 SB09358M No. 23

SB09355M No. 20



No. 10 No. 12 No. 15 No. 20 No. 21 No. 22 No. 23



Sterile Disposable Scalpels

Plastic handle. Blades made of high-quality surgical steel,
honed to provide extremely sharp cutting edges.

Scalpel with No. 10 blade for fine dissection
SB15239M \$31.25 per 10

Scalpel with No. 11 blade for microdissection
SB15240M \$31.25 per 10

Scalpel with No. 21 blade for gross dissection
SB15241M \$31.25 per 10



Scalpel Student Grade

One-piece chrome scalpel, 1½" blade. Student quality.
SB12627M \$3.35 ea.



Scalpel

One-piece stainless steel scalpel, 1½" blade, satin finish
handle. Superior grade.

SA01179M \$1.85 ea.



Safety-Lok Scalpel Student Grade

Chrome-plated forged steel with screw lock to hold
blade firmly in place. Supplied with No. 22 blade.

SA01177M \$1.85 ea.



Snap-Off Blade Knife

Blade is retractable for safety, and snaps off easily when
a fresh point is desired. Plastic knife includes one blade
with 13 points.

9705448M \$1.65 ea.



BIOLOGY

DISSECTION SUPPLIES



Black Wax Dissecting Pans

For general student use in dissections. Durable one-piece construction of aluminum... won't rust, crack, or leak; lasts indefinitely.

Cat. No.	Description	Each
SA00328M	Standard (11½ x 7½") with wax	\$30.25
SB07238M	Standard Pan Only	\$19.95
SB07156M	Deluxe (13-1/8" x 9-3/8" x 2¼") with wax	\$33.65
SA04451M	1 lb. Replacement Wax	\$13.55

18" x 11" Dissection Tray and Accessories

For those large pigs: a dissection tray, pad, and cover that are just the right size! Complete Set. Includes 18" x 11" dissection tray, 18" x 11" pad, and 18" x 11" cover.
SB46037M \$73.55



Dissecting Pins

Steel pins with smooth sharp points and accurately formed heads. ½-lb. box. 2" long.

SA01463M \$16.55 box

Insect Pins

These #3 steel pins are coated with a black corrosion-resistant finish and have a yellow epoxy head. 37 mm long. Sizes 2, 3, and 4 are for most insects; size 5 is for heavy-bodied ones; and 00 and 1 are for small ones.

Package of 100 pins.

SO8228M Size 00 \$9.35
SO8226M Size 1 \$9.35
SO8229M Size 2 \$9.35
SO7828M Size 3 \$9.35
SO8230M Size 4 \$9.35
SO7829M Size 5 \$9.35



Adenna® Gold Latex Powder-Free Exam Gloves

The choice of professionals who demand quality and protection, with minimum risk of potential glove-related chemical or protein allergies. Manufactured with light chlorination rinse, these gloves maintain a nonslip, tacky surface that provides excellent grip for both dry and wet applications. 4 mm thickness. Box of 100 gloves for medium and large; box of 90 for X-large.

C31908M Medium \$31.65

C31909M Large \$31.65

C31910M X-Large \$31.65



For More
GLOVES
see page
60

Poly Gloves

Economical, throwaway, linen-embossed gloves are ideal for laboratory work in biology and chemistry. Dispenser box of 100 gloves is always available, just like "tissues."

Small Size.

SB48963M \$7.45 box

Medium Size

2100320M \$7.45 box

Large Size

2100321M \$7.45 box



T-Pins

Professional quality, steel nickel-plated, ½-lb. box. Approximately 375 pins. 2" long.

2500120M \$32.65



Economy Dissection Trays

Set of 30 9¼" x 11¼" disposable dissection trays.

SB41945M \$16.55



Classroom Dissection Instrument Sets

We offer a set of dissection instruments for the entire classroom. No longer will you be required to select and identify the most cost-effective instruments. Bulk purchase saves money and promotes student use of quality dissection materials. Instruments come packed in handy instrument sorting tray. Designed for 30 students working in pairs.



Stainless Steel Grade Set A Consists of:

- (15) 4½" stainless steel dissecting scissors (SA01146M)
 - (15) No. 4 stainless steel surgeon's handles (SB07833M)
 - (20) No. 22 scalpel blades (SB09348M)
 - (15) 4½" fine-point, stainless steel forceps (SB12629M)
 - (15) straight steel teasing needles (product #SB10275M)
 - (15) angular, chrome probe and seekers (SB07838M)
 - (1) box, 2" dissecting pins (SA01463M)
 - (1) instrument sorting tray (SB25286M)
- SB15428M \$245.45**

Grade Set B Consists of:

- (15) 4½" chrome dissecting scissors (SA01145M)
- (15) chrome safety-lok scalpels. Includes No. 22 scalpel blades (SA01177M)
- (15) 4½" fine-point, chrome forceps (SA01134M)
- (15) straight wood handle teasing needles (SB15414M)
- (15) bent wood handle teasing needles (SB15415M)
- (1) box, 2" dissecting pins (SA01463M)
- (1) instrument sorting tray (SB25286M)

SB15429M \$200.55

Instrument Sorting Tray

Five compartments, 20½" x 11¼" x 2".

SB25286M \$14.65 ea.

Ready-to-Use Humectant Fluid

Designed to prevent drying of tissue while it inhibits mold and bacterial growth. Can also be used to flush the body cavity of larger specimens previously fixed in other solutions. Nontoxic and biodegradable. Includes instructions.

Five 1-gal. Bottles.

SB17218M \$116.25

1-gal. Bottle.

SB12631M \$29.75

1-qt. Bottle.

SB32395M \$9.55

1-pt. Bottle.

SB32396M \$6.95

Humectant Fluid Concentrate

Just add distilled water. Each gallon of concentrate makes 3 gallons of humectant fluid. 1-gal. bottle.

SB24182M \$60.85



Disecto Flex-Pad Advantages:

- washable
- long lasting
- clean
- smooth surface
- latex-free
- removable
- odorless
- pins do not require cleaning after use

Disecto Flex-Pad/Pan with Cover

High-Density Polyethylene Pans:

- Less expensive than aluminum
- Won't rust, crack, or leak
- Nonskid pads prevent movement on table
- Bottom retains shape - does not round with use
- Shallow tray - easy to perform routine dissections
- Only use with Disecto Flex-Pads - not intended to be used with wax



The Disecto Flex-Pad/Pan with cover is designed to allow specimens to remain in the tray between dissection periods or for an extended length of time. The clear plastic cover snaps firmly to the pan to prevent excessive moisture loss. Covers specimens up to 3" high. The units are designed to stack in place or to nest for convenient storage. NASCO suggests the use of NASCO-Guard® Humectant Fluid (see page 38) to moisten specimens between dissections.

Cat. No.	Description	Each
SB11663M	Econopan with Disecto Flex-Pad and Cover	\$15.95
SB11667M	Econopan Only	\$3.25
SB14452M	Econo Disecto Flex-Pad Only	\$7.85
SB11670M	Econo Cover Only	\$5.65
SB15232M	Standard Polyethylene Pan with Disecto Flex-Pad and Cover	\$24.65
SB08756M	Standard Aluminum Pan with Disecto Flex-Pad and Cover	\$35.35
SB15233M	Standard Polyethylene Pan with Disecto Flex-Pad	\$18.45
SB07237M	Standard Aluminum Pan with Disecto Flex-Pad	\$27.95
SB15234M	Standard Polyethylene Pan Only	\$8.65
SB07238M	Standard Aluminum Pan Only	\$19.95
SB07239M	Standard Disecto Flex-Pad Only	\$11.35
SB08753M	Standard Cover Only	\$6.15

**Nasco Disecto
Flex-Pad replaces
messy dissection wax!**
Available in two
sizes & styles.

Econopan-Small (10" x 7")

Pan is constructed of high-density polyethylene for years of continued use. Designed for grades 4-10 where students are involved with routine dissections using earthworms, crayfish, clams, grasshoppers, starfish, perch, and grass frogs.

Standard Dissecting Pan-Medium (11½" x 7½")

For general student use in dissection. Available in both tough, high-density polyethylene and durable, one-piece aluminum construction. Neither will rust, crack, or leak.

Large Animal Dissection Tray

The tray is molded of heavy-gauge, high-density polyethylene for strength and rigidity. The unbreakable, lightweight tray is chemical-resistant and features a skid-resistant bottom.

The 16" x 30" tray holds a 10" x 23" Large Disecto Flex-Pad dissecting surface. (NO WAX - NO MESS.) The trays are easily stacked for storage.

A clear plastic cover is available to protect the specimen during lab practicals or between dissection periods. Fits firmly over the Large Animal tray to prevent moisture loss. Cover is designed to be used with large adult specimens. The Cover is not designed to stack with specimens inside. NASCO suggests the use of NASCO-Guard® Humectant Fluid to moisten specimens between dissections.



Cat. No.	Description	Each
SB07288M	Dissection Tray and Pad	\$78.95
SB09565M	Tray Only	\$47.95
SB07840M	Disecto Flex-Pad	\$32.65
SB09913M	Cover Only	\$18.85
SB32649M	Tray, Flex-Pad, and Cover	\$97.95



Disecto Module Tray System

Interlocking system is designed to stack. The base has four cleats that lock firmly to the cover below. Modules are designed to stack five high with specimens and instruments intact. Each system includes: a storage base, one Econopan with Flex-Pad, and a cover.

SB11664M \$21.95 ea.



Disecto Flex-Pad Bulk Sheets

Trim to fit any dissection pan! Gone are the days of worrying whether or not the Flex-Pad you just purchased will fit your existing dissection pan. These Disecto Flex-Pad Bulk Sheets can be trimmed with scissors or a utility knife to custom fit any size pans. One bulk sheet fills approximately four dissection pans. Bulk sheet size: 17" x 24½".

SB09801M \$64.75 ea.



BIOLOGY

DISSECTION SUPPLIES

Advanced Anatomy Dissecting Kit

A high quality, all-in-one solution for the serious student and educator. An excellent choice for first-year med students or anatomy students. The attractive black vinyl, zippered case features a red velvet inner lining with 10 loops to keep instruments organized and in place, reducing the potential for accidents. Includes: straight teasing needle, bent teasing needle, 4½" iris scissors, 4½" medium point forceps, cartilage knife, 1x2 teeth tissue forceps, 5½" surgical scissors, No. 3 scalpel handle, mall probe, No. 10 scalpel blades (pkg. of 10), 5" hemostatic forceps, and 6" ruler.

SB46659M \$51.15



General Biology Dissecting Kit

Designed for life science and biology students at the junior and senior high level. Kit contains: deluxe single fold vinyl case with lining, No. 4 stainless steel surgical handle with No. 21 replaceable blade, 5½" stainless steel sharp/blunt scissors, 5" stainless steel thumb forceps, chrome mall-probe and seeker, straight dissecting needle, pipette, and 6" ruler.

SB12624M \$16.95



Basic Dissecting Kit

Designed for elementary and junior high school students for routine dissection. Kit contains: single fold vinyl case with lining, 1½" chrome single blade scalpel, 4½" chrome wire dissecting scissors, 4½" chrome-plated forceps, pipette, straight dissecting needle, bent dissecting needle, and 6" ruler.

SB12623M \$17.05 kit



Instructor's Dissecting Kit

This kit is designed for the instructor's personal use in conducting demonstrations or for the preparation of specimens prior to class activities. All instruments are made of quality stainless steel. Kit contains: deluxe zipper case with red velvet-like lining; No. 3 stainless steel surgical handle with No. 10 replaceable blade (2 extra blades included); 1½" stainless steel narrow blade scalpel; 5½" stainless steel sharp/blunt operating scissors; 4½" stainless steel straight iris scissors; 5½" stainless steel thumb forceps; 4½" stainless steel fine-point forceps; stainless steel mall-probe and seeker; and stainless steel straight teasing needle.

SB12625M \$21.55



Biology Dissecting Kit

Designed for senior high biology, advanced biology, and comparative anatomy students. This kit is provided within a high quality, opaque, hinged case with snap cover and compartments for 12 instruments. Kit contains: No. 4 stainless steel scalpel handle; six No. 22 scalpel blades, 1½" stainless steel narrow blade scalpel; 5½" stainless steel sharp/sharp scissors; 4½" stainless steel straight iris scissors; 5½" stainless steel thumb forceps; 4½" chrome curved medium-point forceps; 6" chrome probe and seeker; 6" ruler; straight dissecting needle; bent dissecting needle; and a dropping pipette;

SB10272M \$36.00



Elementary Dissecting Kit

Designed for elementary school students. This Kit contains: single fold vinyl case with lining, 6" chrome replacement blade scalpel, 4½" stainless steel dissecting scissors, 4½" chrome-plated forceps, straight dissecting needle, bent dissecting needle, pipette, and 6" ruler.

SA01127M \$13.25

Elementary Dissecting Kit

Same instruments as SA01127M, but the kit is contained within a semi-transparent hinged case with snap cover. Attractive and reusable.

SB07839M \$14.50



Large Animal Dissecting Kit

A complete dissecting kit in a canvas roll case with adjustable loops that hold additional instruments: The kit features fine quality instruments 6¼" stainless steel Peans haemostat; 5½" stainless steel Kelly haemostat; No. 3 stainless steel scalpel handle; No. 10 scalpel blades (6); No. 11 scalpel blades (6); 4½" stainless steel iris scissors; 5½" stainless steel operating scissors; 4½" chrome, straight, fine-point forceps; 5½" chrome, straight, medium-point forceps; 6" chrome probe and seeker 5¼" section lifter; metal, straight dissecting needles (2); 2½" double-prong flesh hooks; and a 6" celluloid ruler.

SA01129M \$40.25



Biology Dissecting Kit

Designed for biology, advanced biology, and comparative anatomy students. Kit contains: double fold vinyl case with lining; 1½" stainless steel scalpel; 1½" stainless steel narrow blade scalpel; 5½" stainless steel sharp/blunt scissors; 4½" stainless steel iris scissors; 4½" chrome, straight, fine-point forceps; 4½" chrome, curved, fine-point forceps; 5" chrome, straight, blunt-point forceps; straight dissecting needle; bent dissecting needle; 6" chrome probe and seeker; and 6" ruler.

SA04449M \$26.45



Zippy Dissecting Kits

Screw-lock blade scalpel. Each kit contains: 6" plastic ruler, chrome-plated student dissecting scalpel, glass dropper with rubber bulb, 4½" student dissecting scissors, chrome-plated 4½" student forceps, straight teasing needle with plastic handle, and angular teasing needle with plastic handle. Case dimensions: 2½" W x 7" L x 7/8" H.

SB39430M \$15.25





By Calvin R. Fremling, Ph.D.



Section of dried swine lung



BioQuest® Inflatable Lungs Kits

These dramatic demonstration kits provide an impressive, unforgettable, hands-on demonstration of how lungs work. The effects of prolonged smoking are shown using real swine lungs. Students are able to feel the texture and fragility of the lung, and learn that real lungs feel more like sponges than balloons. The smoker's lungs have a palpable internal tumor and a physical, simulated, external tumor. Students will learn (and remember) that smoking is a known cause of lung cancer. The Real inflatable swine lungs have been preserved with a flexible, nontoxic solution that retains the texture and elasticity of fresh lungs. **Note: this product contains natural tissue: colour may vary.**



BioQuest® Inflatable Lungs Comparison Kit

This inflatable lung comparison kit is designed to demonstrate the effects of prolonged smoking. It utilizes the BioFlex preserved lungs from the Inflatable Lung Kit (LS03765M) and the BioFlex preserved lungs from the Simulated Smoker's Lungs Demonstration Kit (LS03767M) to demonstrate to students the differences in colour and texture of smoker's and non-smoker's lungs. The BioQuest® Comparison Lungs Kit includes an inflation rack and tray; air pump; one pair of reusable, normal inflatable swine lungs with guide; one pair of Simulated Smoker's Lungs with guide; one section of dried swine lung; and a 2-qt. container for storing the lungs.

LS03768M \$543.35 kit

Inflatable Lung Comparison Kit (LS03768M) and Teacher Instructional DVD (SB46162M).

LS03769M \$551.15 set

Each lung is inspected and tested prior to packaging.



Dual Lungs Comparison Kit

Now for the first time you can demonstrate both sets of lungs simultaneously for better lungs comparison with the new interconnected airway system. This system lets you compare the ventilation of both sets of lungs simultaneously, or shut off one of the upper valves to inflate only one set of lungs. Kit includes an interconnected airway system with dual trays; air pump; one pair of reusable, normal inflatable swine lungs with guide; one pair of simulated smoker's lungs with guide; and one section of dried swine lung with a storage container.

LS03802M \$621.05 ea.

Dual Lung Rack Update Kit. Do you already own the inflatable lung comparison kit? You can convert your kit to the dual lung rack with this update kit. Includes an interconnected airway system and tray.

LS03805M \$89.35



BioQuest® Inflatable Lungs Kit

Students can see and learn how lungs, that are very comparable with their own, work by inflating and deflating them with a pump. A section of dried lung is included to show internal anatomy structures including arteries, veins, bronchioles, alveoli, and bronchi. The BioQuest® Inflatable Lungs Kit includes an inflation rack and tray; air pump; one pair of reusable, inflatable swine lungs, one section of dried swine lung, a teacher's guide; and a container for storing the lungs.

LS03765M \$326.05 kit



Real SWINE LUNGS
treated with carbon to simulate a smoker's lung.

BioQuest® Smoker's Lungs Demonstration Kit

Great demonstration on the effects of smoking! Includes a teacher's guide, a pamphlet *If You Smoke...Here's What Your Doctor May See*, an inflation rack and tray, air pump, a dried section of unstained lung, a pair of Simulated Smoker's Lungs, and a container for storing the lungs.

LS03767M \$363.65 kit

LUNG KIT ADD-ONS

Teacher Instructional DVD

30 minutes.

SB46162M \$20.55

Replacement Components

Simulated Smoker's Lungs only.

LS03766M \$232.85 ea.

Inflatable Swine Lungs only.

LS03764M \$209.55 ea.

Inflatable Lungs

Maintenance Kit

Includes necessary materials plus special instructions for prolonging the life of your inflatable lungs. Kit includes: spray bottle with humectant fluid to keep lungs moist, towel to moisten and wrap around lungs, nylon thread and needles (to repair tears), glue (to repair tears), rubber bands, rubber gloves, and a 2-qt. container for storing the lungs.

LS03738M \$59.75 kit



EDUCATORS WHO LOVE TO TEACH are as passionate as we are about specimens. NASCO-Guard® premium products create a safer, superior, and better dissection classroom experience to enhance your teaching. Our affordable, premium-quality, broad selection of low-odor specimens have been prepared with our exclusive nontoxic NASCO-Guard® humectant fluid, ensuring specimens are 99.7% formaldehyde free, exceeding OSHA standards. Don't be fooled by false promises, check the Safety Data Sheets that all our specimens come with and see the difference for yourself.

KNOW THE DIFFERENCE

NASCO-Guard® specimens have a shelf life guaranteed indefinitely when stored in the original, sealed packaging, so you can be confident of consistent results with expertly preserved specimens. Nasco offers easy-to-find injections to show clear and visible differentiation of key organs and structures, providing an enhanced experience (see images below). Nasco also offers custom packaging and orders upon request.

SPECIMEN PROCUREMENT

In our Wisconsin facility, we are licensed and/or governed by the U.S. Fish and Wildlife Service, the United States and Wisconsin Departments of Agriculture, and the Wisconsin Department of Natural Resources. We obtain specimens through professional collectors, by-products from stockyards, and food industry. All of these are processed and packaged by skilled technicians, ensuring top quality standards are met. Worldwide collections are also monitored by the Convention on International Trade in Endangered Species (CITES).



CUSTOM PACKAGING OPTIONS AVAILABLE

Our specimens come in 3 convenient packaging options, available upon request: individual vacuum-sealed bags, jar sets, or pails. Mix and match for the exact quantity you need for your classroom.



SINGLE INJECTION

- Arteries injected with red latex



DOUBLE INJECTION

- Arteries injected with red latex
- Veins injected with blue latex



TRIPLE INJECTION

- Arteries injected with red latex
- Veins injected with blue latex
- Hepatic portal system injected with yellow latex

NASCO-Guard®...delivering safer and superior dissection

Octopus (*Octopus bairdi*)
Small 2"-5" (5-12 cm).
LS01303M \$28.65 ea.

Sea Anemone (*Metridium*)
Large. 2" (5 cm) dia. at base.
LS01279M \$4.85 ea.

Medium.
1-1/2" (4 cm) dia. at base.
LS02394M \$3.85 ea.

Jellyfish (*Aurelia*)
Large. 3"-4".
LS01272M \$7.05 ea.
Medium. 2"-3".
LS03614M \$5.45 ea.

Pig Roundworm (*Ascaris suum*)
Unit of 10.
LS01071M \$38.85 unit

Please note: Items sold only as a unit of 10 will be shipped bulk packaged on orders of 2 or more units. Please specify if individual units are needed when ordering.



Sandworm/Clam Worm (Nereis)

Large, 8" (20 cm) and over.

LS01292M \$4.15 ea.; 10 or more \$4.30 ea.; 100 or more \$4.50 ea.



Earthworms (Lumbricus terrestris)

Plain earthworms are the standard for the industry for dissection by beginning as well as advanced students. With latex-injected earthworms, students can easily trace the circulatory system identified with coloured latex.

Cat. No.	Size	10/pk
LS02407M	20-25 cm	\$14.85 /10pk
LS01081M	20-25 cm	\$6.95



Worm Dissection Kit

Includes two 8"+ J1 injected worms.

LS03853M \$34.50

BUDGET STRETCHER

EARTHWORM CLASSROOM PACK SPECIAL

Order 3 units of 10 earthworms (20-25 cm, LS02407M) and 1 set of 15 Earthworm Dissection Guides (SB07316M) and SPECTRUM will supply an additional set of 15 Earthworm Dissection Guides FREE! Allow each student to have their own dissection guide. **Must be ordered by catalogue number LS03719M to receive special classroom pack price.** LS03719M SPECTRUM Price \$69.35 pack



Save!
Buy the Set

30 EARTH WORMS AND DISSECTION GUIDES

Marine Clam Dissection

Examine the anatomy of the marine clam without conducting the dissection yourself. An opened marine clam specimen is encased in clear acrylic. Eleven parts are clearly labeled, including excurrent siphon, incurrent siphon, anus, posterior adductor muscle, heart, visceral mass, anterior adductor muscle, mouth, foot, mantle, and gill. Block measures 4 1/4" x 3 3/8".

SB48348M \$131.95



Freshwater Clams (Unio or Anodonta)

10-12.5 cm.

LS01083M \$5.45 ea.

7.5-10 cm.

LS03464M \$4.15 ea.



Squid (Loligo)

Cat. No.	Size cm	Injection	Each	10 or More, Each
LS01302M	30-40 cm	Plain	\$12.45	\$10.52
LS02420M	30-40 cm	Single	\$15.85	\$14.50
LS01304M	30-40 cm	Double	\$20.00	\$18.85
LS02421M	20-30 cm	Plain	\$8.75	\$7.37
LS02422M	20-30 cm	Single	\$10.85	\$9.12
LS03574M	12.5-20 cm	Plain	\$5.45	\$4.56



Squid Dissection Display

Specimen preserved and encased in clear resin material to be observed easily from every side to see details. Easily study the anatomy of the squid without all the mess of performing the dissection yourself. Information key included. 10 3/4" x 5 3/4" x 3".

SB52042M \$95.00

BUDGET STRETCHER

CRAYFISH CLASSROOM PACK SPECIAL

Order 30 Crayfish (10-15 cm, LS01314M) and 1 set of 15 Crayfish Dissection Guides (SB07315M) and SPECTRUM will supply an additional set of 15 Crayfish Dissection Guides FREE! Save \$15.40 and allow each student to have their own dissection guide. **Must be ordered by catalogue number LS03720M to receive special classroom pack price.** LS03720M SPECTRUM Price \$93.05 pack

30 CRAYFISH AND DISSECTION GUIDES

Save!
Buy the Set

Crayfish Dissection Kit

Crustaceans have been in existence since the dinosaur age. Explore the crayfish firsthand to learn why this invertebrate is so popular. Includes a 4"-6" plain crayfish.

LS03852M \$27.00



Best
SELLER

Crayfish (Cambarus)

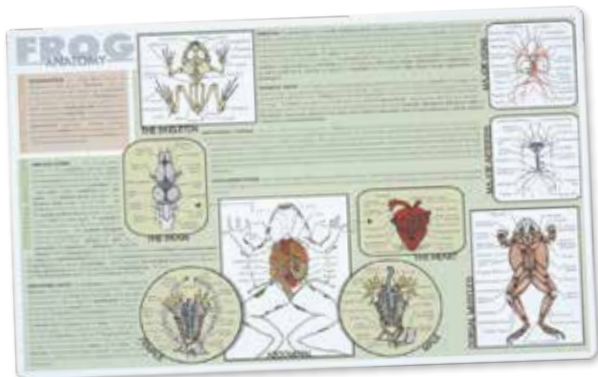
Cat. No.	Size	Injection	Each	10 or more Each	100 or more Each
LS01314M	10-15 cm	Plain	\$2.05	\$1.75	\$1.71
LS02428M	10-15 cm	Single	\$2.45	\$2.09	\$2.04
LS02952M	7.5-10 cm	Plain	\$1.45	\$1.21	\$1.19



BIOLOGY

PRESERVED MATERIALS

For
**DISSECTION
TOOLS & KITS**
see pages
32-36



Frog Dissection Mat

Allows the student to follow the directions for a complete dissection without the worry of damaging books or paper. A complete frog dissection is printed directly on this 9¾" x 16" polyvinyl mat. Resistant to spills, it is easily cleaned with a sponge or paper towel. More durable than laminated paper, this mat will last for many lab sessions. Middle school and up.

SB32577M \$15.85



Frog Dissection Kit

This commonly used dissection specimen is easy to handle, easy to identify organs and structures, and works well with students of various ages. Includes a 4"-4½" frog.

LS03850M \$33.65



Giant Magnetic Frog Life Cycle

9-Piece jumbo die-cut magnetic set illustrating the life cycle of a frog from egg through tadpole to adult. Full-colour, life-like illustrations.

732974 \$29.95



Bullfrogs (*Rana* sp.)

Cat. No.	Size cm	Injection	Each
LS02503M	15-17.5 cm	Plain	\$23.65
LS01362M	15-17.5 cm	Single	\$25.75
LS01363M	15-17.5 cm	Double	\$28.65
LS02509M	15-17.5 cm	Triple	\$32.45
LS02502M	12.5-15 cm	Plain	\$18.65
LS01365M	12.5-15 cm	Single	\$21.85
LS01366M	12.5-15 cm	Double	\$24.05
LS02508M	12.5-15 cm	Triple	\$27.85

BioQuest® Pro-Sect™ Bullfrog

Observe a frog without dissection. Pro-Sect™ system displays a partially dissected, 10-12.5 cm bullfrog to study the anatomy. Bullfrog is displayed in a transparent, safe-to-handle, liquid-filled, plastic tray that is molded and sealed. Internal organs such as the liver, heart, veins and arteries have been injected with coloured latex to identify circulatory function. Includes comprehensive study guide. Internal organs are identified on transparent overlay for study or testing purposes.

LS03742M \$232.85

**REAL
SPECIMEN**





For
**DISSECTION
TOOLS & KITS**
see pages
32-36

Grass Frogs (*Rana* sp.)

Cat. No.	Size	Injection	Each	10 or more	100 or
				Each	more Each
LS03712M	11.25-13.8 cm	Plain	\$12.30	\$11.93	\$11.69
LS03713M	11.25-13.8 cm	Single	\$13.75	\$13.34	\$13.06
LS03714M	11.25-13.8 cm	Double	\$14.80	\$14.36	\$14.06
LS03715M	11.25-13.8 cm	Triple	\$16.65	\$16.15	\$15.82
LS02492M	10-11.25 cm	Plain	\$8.15	\$7.91	\$7.74
LS02494M	10-11.25 cm	Single	\$9.05	\$8.78	\$8.60
LS02496M	10-11.25 cm	Double	\$10.50	\$10.19	\$9.98
LS02497M	10-11.25 cm	Triple	\$11.95	\$11.59	\$11.35
LS01373M	7.5-10 cm	Plain	\$5.10	\$4.95	\$4.85
LS02493M	7.5-10 cm	Single	\$6.15	\$5.97	\$5.84
LS02495M	7.5-10 cm	Double	\$7.20	\$6.98	\$6.84

BUDGET STRETCHER

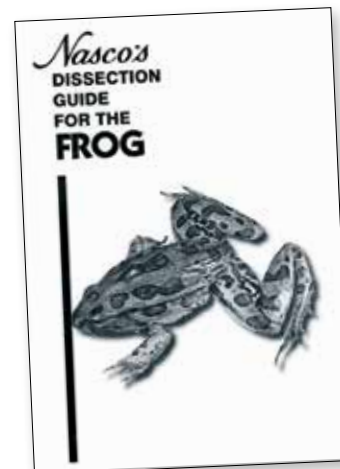
FROG CLASS PACK SPECIAL

Includes 30 frogs (4"-5", LS02492M) and 1 set of 15 Frog Dissection Guides (SB10258M). SPECTRUM will supply an additional set of 15 Frog Dissection Guides FREE! Save and allow each student to have their own dissection guide. **Must be ordered by catalogue number LS03724M to receive special class pack price.**

LS03724M SPECTRUM PRICE \$279.25 pack

30 Frogs and Dissection Guides

Save!
Buy the Set



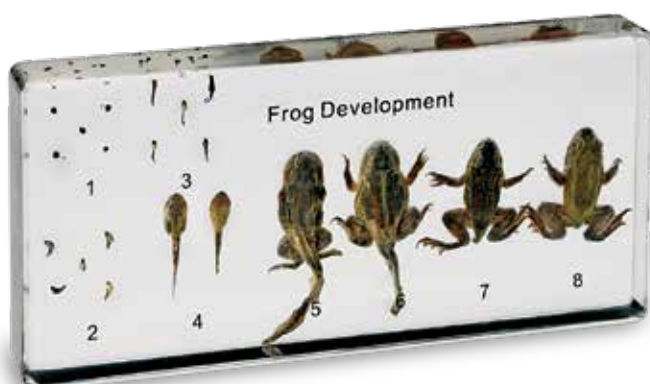
Frog Dissection Guide

Well-illustrated, 5½" x 8½" guide designed for grades 6-10. Set of 15.
SB10258M \$23.05 set

Preserved frogs supplied by NASCO come from a collecting area that has been renewing its population over the past 28 years because of habitat improvement by man. NASCO does not supply frogs for dissection from collecting areas that might be in danger of population depletion.

Frog Classroom Pack Deluxe

The same great deal as the Frog Class Pack Special (LS03724M) but also includes 30 9¼" x 11¼" disposable Dissection Trays (SB41945M).
LS03724AM \$310.00



Frog Development Display

Eight stages in the frog's life cycle are represented in this clear acrylic embedment. Each stage is numbered and referenced to an enclosed key card. Stages range from the one cell stage, through various tadpole stages, and conclude with a froglet. 5¾" x 2½".

SB48215M \$74.95

BioQuest® Frog Development Study Kit

Students can clearly see the adult frogs and their embryos in the viewing cavities from the blastula stage to the emergence of fully developed young frogs. Eight stages of embryo development plus adult male and female frogs can be safely and conveniently viewed and handled in a specially developed plastic display tray. Kit includes 10-cavity plastic display tray, one frog embryo development chart, teacher's guide, and reproducible student activity sheets.

LS03728M \$182.75 kit



**REAL
SPECIMEN**

Frog Life Cycle 3-D Model Making Kit

Students will enjoy learning all about frogs and their life cycle with this colourful model making kit. The set includes models of the adult frog, froglet, tadpole and eggs. After students assemble the frog model, they then look at how the frog changes through its life cycle. The Model Making Kit includes enough materials for students to assemble up to 10 paper models working cooperatively. The comprehensive Teacher Resource Guide included provides illustrated readings, activities, key vocabulary and an assessment, along with teaching opportunities for students.

735468 \$44.95



Frog Life Cycle Specimen

A specimen showing the life cycle of a frog.

76640 \$44.25



BIOLOGY

PRESERVED MATERIALS



BioQuest® Advanced Owl Pellet Kit

This kit is highly motivational to students for regular class or independent study. Both teacher and student guides are professionally produced and include easy-to-follow directions. Illustrations identify skulls of common prey species and charts are provided for students to record the data collected. Principally, students learn about energy transfer through food chains while observing skeletal features which identify prey animals consumed. Kit includes 15 dried and fumigated owl pellets wrapped in aluminum, probes, vole chart, 15 student worksheets, and teacher's guide.

SB20192M \$124.00 kit

Additional Owl Pellets.

SB09759M \$6.25 ea.

10 or more \$5.50 ea.

100 or more \$5.10 ea.

Small Owl Pellets.

SB09759SMM \$3.95 ea.

10 or more \$3.70 ea.

100 or more \$3.50 ea.

Perfect Pellets™

Perfect pellets are owl pellet replicas and are manufactured using state of the art plastics technology. Each synthetic pellet contains a virtually complete replica of one of the common barn owl prey species, either the rodent, mole or bird skeleton. They are slightly easier to dissect than organic owl pellets and the same great labs can be experienced but without the confusion of partial or multiple animal skeletons. **Each Perfect Pellet™ package will contain an equal assortment of the Vole, Mole and Bird.**

732960 6 pack \$33.80

732962 15 pack \$81.55

732964 30 pack \$159.95

732966 60 pack \$318.25



Perfect Pellet™ Deluxe Kit

Kit Contains:

- 30 Large **Perfect Pellets™**: 10 Rodent, 10 Mole & 10 Bird
- Teacher's Guide with suggested teaching strategies, background information, laboratory guide, skull keys, and references
- 6 Posters: Food Web, Rodent, Mole & Bird Skeleton, Bone Sorting Chart & Human/Vole Comparison
- 15 Bone Sorting Charts for individual student use

732958 \$243.30



Perfect Pellet™ Classroom Kit

Kit Contains:

- 15 Large **Perfect Pellets™**: 5 Rodent, 5 Mole & 5 Bird
- Teachers Guide with suggested teaching strategies, background information, laboratory guide, skull keys, and references
- 5 Posters: Food Web, Rodent, Mole & Bird Skeleton & Bone Sorting Chart

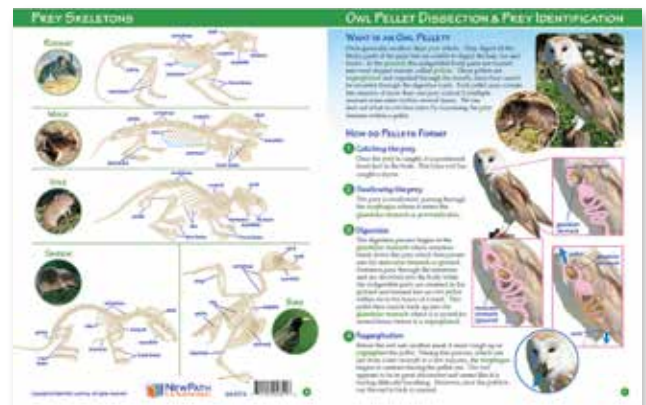
732956 \$129.30



Bone Sorting Charts

Pack of 15. A great classroom aid. Primary skeletal features of rodents, shrews, moles and birds. Package of 15 paper charts.

76598 \$14.25



Owl Pellet Dissection & Prey Identification Visual Learning Guide

The laminated 11" x 17" guide includes 4 pages:

- Features an illustrated description of Owl Pellets and how they form
- Covers owl pellet dissection
- Presents prey bone identification and sorting
- Provides detailed prey skeletons

731030 \$9.95



Owls & Owl Pellets Flip Chart Set

Laminated charts, each 12" x 18" and spiral bound on a durable, free-standing easel. Set Includes the following 10 charts:

1. Owls - Birds of Prey
2. The Barn Owl
3. Owl Food Web
4. Owl Pellets
5. Dissecting an Owl Pellet
6. Rodent Skeleton
7. Vole Skeleton
8. Mole Skeleton
9. Shrew Skeleton
10. Bird Skeleton

731839 \$59.95





Owl Pellets

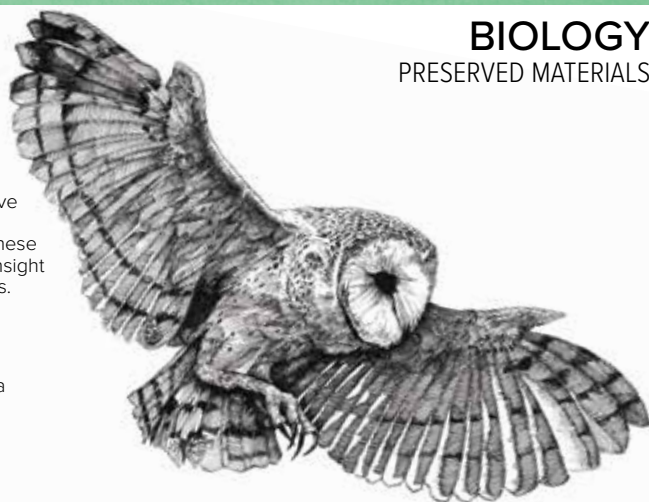
Small, compact balls of fur, feathers, and bone which have been regurgitated by an owl after feeding. Dissection of these pellets helps students gain insight to predator-prey relationships.

SB09759M \$6.75 ea.

Bucket O' Pellets — Large.

Includes 100 large pellets in a plastic bucket with lid.

SB42866M \$504.55



Classroom Owl Pellet Kit

Excellent for Owl Pellet studies. Features Food Web poster, Vole Skeleton poster and Bone Sorting Chart poster showing bones of rodents, shrews, moles and birds. Includes 15 heat-sterilized, individually wrapped Barn Owl pellets and a Teacher's Guide containing background information, suggested teaching strategies, a laboratory guide, projects, skill keys and references.

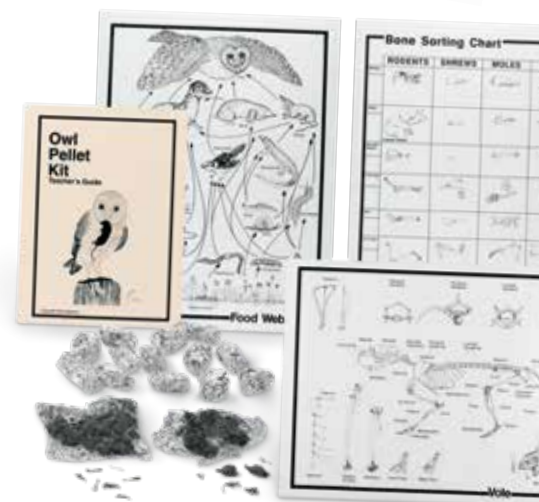
76596 \$112.70

76600 Poster Set \$47.40

Deluxe Classroom Owl Pellet Kit

Comes with eight posters: bone sorting, food web, vole, bird, mole and shrew skeleton, human/vole skeletal comparison, and pellet formation. Includes set of fifteen 8½" x 11" bone sorting sheets and 30 large, heat sterilized, individually wrapped barn owl pellets. Teacher's guide provides suggested teaching strategies, background information, laboratory guide, projects, skull keys, and references.

SB42198M \$213.75



Owl Pellets and Common Prey Display

A great reference for students doing owl pellet labs, and a nice display for any discussion on predator-prey relations. This mount includes a complete owl pellet, a partially dissected owl pellet showing skeletal remains, and skulls and mandibles of five common prey found in owl pellets. All treated with casting acrylic. Labeled skulls include a shrew, mouse, vole, rat, and pocket gopher as they usually appear after pellet dissection. 8-12" x 6-12".

SB31333M \$139.45

Owl Pellet Kit

Investigate the roles of small animals in the food chain. Students dissect regurgitated owl pellets containing undigestible pieces of their prey and identify their contents using illustrated worksheets. For 30 students. Includes 15 owl pellets, 15 teasing needles, 30 worksheets, and detailed guide.

SB33780M \$178.45



BioQuest® Basic Owl Pellet Kit

Teachers and students use professionally prepared guides to study food chains from regurgitated owl pellets. Pellets are easily dissected to expose skulls and other skeletal parts. The undigested remains of animals provide bones, teeth, hair, or feathers as evidence of prey animals. Charts of skulls and skeletons help students identify prey animals. Additional exercises can be conducted. Kit contains 15 dried and fumigated owl pellets wrapped in aluminum, 15 student worksheets, and a teacher's guide.

SB20193M \$88.45



BIOLOGY

PRESERVED MATERIALS

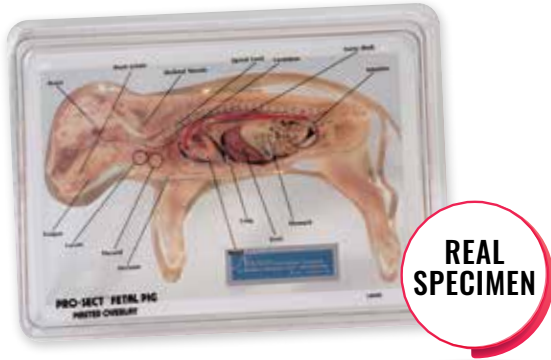


Fetal Pig Sagittal Section

This sagittal section of an 11"-12" artery-injected fetal pig is useful for students to observe internal organs and vessels before starting their dissection. The NASCO-Guard® sagittal section comes Vacu-Packed in a clear plastic bag for use as a demonstration model, or it can be removed for dissection. Teacher's guide included. **LS03565M \$31.80 ea.**

Fetal Pigs

Cat. No.	Size cm	Injection	Each	10 or More, Each
LS03793M	33 - 40.6 cm	Triple	\$43.30	\$42.00
LS03792M	33 - 40.6 cm	Double	\$37.80	\$35.02
LS03791M	33 - 40.6 cm	Single	\$33.95	\$32.93
LS03790M	33 - 40.6 cm	Plain	\$31.80	\$30.85
LS03789M	25.4 - 30 cm	Double	\$33.95	\$32.93
LS03788M	25.4 - 30 cm	Single	\$31.10	\$30.17
LS03787M	25.4 - 30 cm	Plain	\$32.00	\$28.03
LS03786M	17.8 - 25.4 cm	Double	\$28.90	\$28.03
LS03785M	17.8 - 25.4 cm	Single	\$26.75	\$25.95
LS03784M	17.8 - 25.4 cm	Plain	\$28.20	\$23.81
LS03783M	10 - 17.8 cm	Plain	\$22.28	\$16.83



**REAL
SPECIMEN**

The Pro-Sect™ Teaching System from NASCO

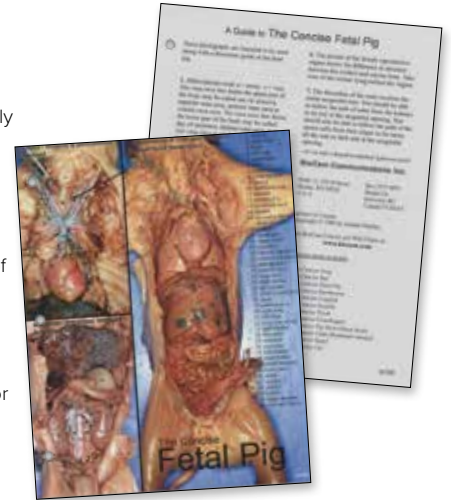
A Great Way to Teach Basic Mammalian Anatomy to Students Without Dissection. The Pro-Sect™ System displays an 11"-12", sagittally sectioned, preserved fetal pig molded and sealed in a transparent, safe-to-handle, liquid-filled, plastic tray. Includes a comprehensive instructional guide providing supplementary information for teacher and advanced students; student guide; master transparent overlay identifying 15 major internal organs, and a reproducible test sheet.

LS03725M \$182.25

The Concise Fetal Pig Chart

Learn the anatomy of the fetal pig without actually dissecting one! Chart contains six photographic images (three on each side) portraying an enlarged view of the stomach region, female internal anatomy, male internal anatomy, thorax with the thymus and pericardium removed, abdomen with the intestines removed and liver cut back, and a view of a superficial dissection of the abdominal and thoracic regions. Each image has important parts numbered and labeled for easy identification. Also included is a one-page guide explaining the chart in further detail. Both 8-12" x 11" sheets are included together in a protective sleeve and with holes pre-punched for inclusion in a binder.

SB50649M \$11.50



"Try It" Fetal Pig Dissection Kit

Grades 4-9. Perfect for first time pig dissection. Comes complete with a 7"-10" preserved fetal pig, elementary dissecting kit, plastic apron with fetal pig anatomy diagram, illustrated fetal pig dissection guide, and a pair of poly gloves. Just try it!

LS03815M \$52.75



Pig Dissection Mat

A complete pig dissection is printed directly on this 9¾" x 16" polyvinyl mat. Resistant to spills, it is easily cleaned with a sponge or paper towel. More durable than laminated paper, this mat will last for many lab sessions.

SB32578M \$14.80

Fetal Pig Aprons

A fun, practical way to learn the anatomy of the fetal pig! Made of 3 mil polyethylene. Aprons do not protect from harsh chemicals. Box of 100.

SB35157M \$114.60



An Illustrated Dissection Guide to the Fetal Pig

Covers the complete dissection, relationships among organisms, and functions of the structures. 11 detailed illustrations.

SB42373M \$12.90

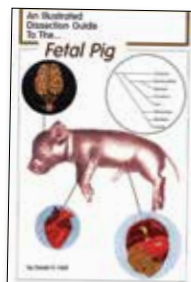
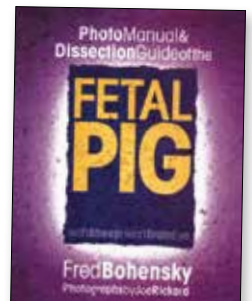


Photo Manual and Dissection Guide to the Fetal Pig

This book guides the student through the study of anatomical structures using clearly marked photographs and illustrations. Accompanying text offers the student both easy-to-follow dissection instructions and factual information about the section under observation. Tests at the end of each chapter can be used for self-study or for grade course evaluation. 128 pages



Sheep Organs

Cat. No.	Description	Each
LS03699M	Sheep Head with eyes, brain and lower jaw	\$22.80
LS03698M	Sheep Half Head with one eye, half brain, no lower jaw	\$17.00
LS01155M	Sheep Heart	\$8.40
LS03701M	Sheep Heart, double-injected, arteries (red), veins (blue)	\$17.35
LS01152M	Sheep Brain with cranial nerve roots	\$18.20
LS03354M	Sheep Half Brain with cranial nerve roots	\$11.95
LS03570M	Sheep Brain with hypophysis and cranial nerve roots	\$18.45
LS03546M	Sheep Brain with dura mater, fully extracted	\$22.40
LS01439M	Sheep Eyes, unit of 10	\$17.35
LS01440M	Sheep Kidney	\$7.60
LS03493M	Sheep Larynx with epiglottis, vocal cords, and portion of trachea intact	\$8.60
LS01627M	Sheep Pluck. Heart, Lungs, and Trachea	\$21.65
LS03494M	Sheep Testicle	\$12.30
LS03700M	Sheep Uterus, pregnant, 3"-6" embryo	\$54.00



Sheep Head,
Half



Sheep Head,
Whole



Sheep Brain



Sheep Heart



Sheep Kidney



Sheep Eye

Pro-Sect™ Sheep Organ Survey Mount

The ideal way to teach mammalian anatomy - without dissection! In this sheep organ survey mount, the heart, kidney, brain, and eye have been dissected and sealed in a transparent, safe-to-handle, liquid-filled plastic tray. Kidney is triple-injected with arteries in red, veins in blue, and urethra in yellow; and the brain is single-injected with arteries in red. Organs are sectioned and labeled for easy identification. Set of guides included. Tray measures: 13" x 9" x 2½".

LS03752M \$175.30

**REAL
SPECIMEN**



Mammalian Eye Comparison, Class Set of 30

Your students will observe, compare, dissect, and determine the subtle difference between the three most common eyes found in the biology dissection lab. Includes 30 sheep, 30 cow, and 30 pig eyes, plus 30 detailed mammalian eye dissection guides.

LS03828M \$122.80



Sheep Organ Set

A popular combination of sheep organs in a convenient storage box. Includes re-closable storage bag. Consists of one each of eye, brain, kidney, and heart. Dissection guides for each are included.

LS03140M \$36.70 set



Parts of the Eye Apron

This anatomically-correct, lightweight, disposable apron helps protect student's clothing from debris and other laboratory waste. A fun, practical way to learn the anatomy of an eye. Made of 3 mil polyethylene. Aprons do not protect from harsh chemicals. Box of 100.

SB42833M \$109.60



BIOLOGY

PRESERVED MATERIALS



Cow Eye Dissection Kit

Step-by-step instructions make dissecting this cow eye simple! Includes a cow eye.

LS03859M \$18.05

Mammalian Anatomy Survey Set

Consists of one each of the organs listed below. Dissection guides for each are included.

Brain (half, sheep)

Eye (cow)

Heart (with aorta, sheep)

Kidney (pig)

Spinal cord (cow)

LS03497M \$33.95 set



Preserved Reproductive Tract From Cow

Complete reproductive tract including ovaries, oviducts, uterus, vagina, bladder, and external organ. Preserved with Nasco's exclusive BIO-FLEX process. Extremely lifelike. Ideal for the study of the gross anatomy of the female reproductive system. Can be kept in a plastic bag and used repeatedly for long periods of time.

LS02798M \$118.10

Cow Organs

Cat. No.	Description	Each
LS01630M	Calf Heart with base of aorta attached.	\$27.80
LS01631M	Calf Light. Heart, Lungs, and Trachea. Lungs embalmed.	\$52.00
LS01628M	Cow Eye	\$3.95
LS02533M	Cow Spinal Cord, Over 4" section.	\$9.40
LS03488M	Cow Uterus. Non-pregnant.	\$37.55
LS03532M	Calf Testicles	\$13.50
LS03717M	Beef Heart	\$44.50



Pig Organs

Cat. No.	Description	Each
LS02530M	Pig Heart	\$10.50
LS03808M	Pig Heart, double-injected, arteries (red), veins (blue)	\$17.35
LS03569M	Pig Heart in pericardium	\$15.20
LS02532M	Pig Eye	\$2.55
LS03352M	Pig Kidney. Plain	\$8.35
LS03353M	Pig Kidney. Double injected	\$12.30
LS03489M	Pig Kidney. Triple injected	\$13.00
LS03490M	Pig Ovary	\$4.70
LS03491M	Pig Uterus. Nonpregnant, plain	\$33.75
LS03492M	Pig Uterus. Pregnant, plain	\$67.50
LS03544M	Pig Stomach	\$28.90
LS03593M	Pig Small Intestine, 1 ft. section	\$7.60
LS03612M	Pig Larynx w/epiglottis, vocal cords, and portion of trachea intact	\$9.05

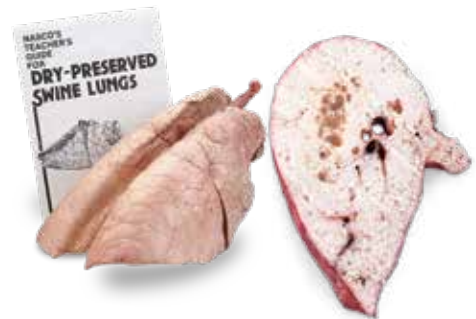
NASCO Dry-Preserved Swine Lungs

These swine lungs are preserved, inflated to full size and dried to produce a REAL odorless specimen. Lungs are about the consistency of Styrofoam®. It is possible to slice thin sections of the specimen to observe the alveoli and other structures under a binocular microscope. Teacher guide included.

LS01956M \$53.45

Dried Swine Lung Section.

LS03686M \$5.70



NASCO Solid Dry-Preserved Swine Heart

An odorless, completely dry swine heart that is preserved to last as long as any model.

Similar to the human heart in size and structure. The veins, arteries, and valves are easily identified, and interior muscling is clearly visible. The heart is delivered in sectioned form to facilitate study of internal structures. This is an actual organ that is permanently preserved through a special NASCO process.

LS01955M \$41.20



All About Animals Learning Center

This complete, easy-to-use learning center is perfect for learning essential grade appropriate science skills. Designed for either teacher-directed instruction or independent use by groups of up to 4 students, the Learning Center covers the Animal Kingdom. The All About Animals Learning Center provides materials for 4 students and includes:

- Four Visual Learning Guides – all focused on this key topic – for direct instruction through an easy-to-follow topic overview; “write-on/wipe-off” activities; and guiding, assessment review questions.

- One Curriculum Mastery Game for small group review, featuring one set of 30 illustrated, self-checking question cards; a laminated game-board; materials for four players; and student instructions.

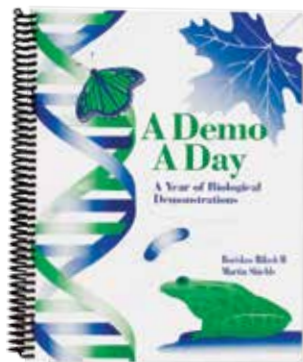
735697 \$48.85



A Demo A Day Biology

Enliven the concepts of biology with these demonstrations! With more than 200 demonstrations, this book aims to supplement standards-based curriculum and serve as engaging launching pads for lessons by offering concrete visualization of abstract concepts. Because of the constraints imposed by organisms, some of the demos are extended and require from a day to a few weeks to unfold. However, all of the entries aim to satisfy the basic value of demonstration. That is, they fill only a brief portion of any given class period. Also, there are limitations on time and material resources that preclude the teaching of every concept with student hands-on participation. Some of the topics include: **Process of Scientific Inquiry and Safety; Chemistry of Biology; Kinetics of Biology: Enzymes; Cells: Structure, Function, and Division; DNA and Biotechnology; Diversity of Life: Microorganisms; and Ecology and Environmental Issues.** 300 pages.

SB43858M \$73.05



Collecting and Mounting Kit

Designed as a complete instructional unit for secondary level students or beginning collectors, the kit contains all fundamental equipment needed to collect, prepare, and maintain specimens of most insect orders. Kit includes a 12" diameter collecting net, insect box, two killing jars, ethyl acetate killing fluid, forceps, spreading board, pinning block, pins, glassine envelopes, labels, fumigant, 4X folding magnifier, pen, and illustrated instruction book.

SA02725M \$116.25



Pond Nets - Pack of 5

Robust nets with close weave mesh netting, ideal for pond-dipping activities. Colour may vary. Size of net: 120 x 110 mm.

Handle: 250 mm.

735559 \$16.80

Explore One Land & Water Habitat

You can create a terrarium for all the insects and bugs you find by simply putting soil and plants in the bottom of the jar. Observe your finds using the tweezers and the two different magnifiers. Four piece set includes: 3.5 L container with handle, detachable magnifier, hand held magnifier, net for catching insects and tweezers.

735072 \$29.20



All About Animals Bulletin Board Charts - Set of 5

This 5 chart set includes a collection of separate posters, each covering a separate, curriculum topic. Uniquely designed, while one side can be posted for student reference, the reverse features dry-erase activities perfect for individual student review or as a learning center activities! Graphic images and hands-on activities combine to provide comprehensive coverage of essential student skills. Each 12" x 18" Chart is laminated and double-sided.

The All About Animals Bulletin Board Chart Set includes the following 5 charts:

- All About Animals
- Birds & Mammals
- Life Cycles; Reptiles
- Amphibians & Fish
- Where Animals Live

735698 \$29.95



BIOLOGY

LIVE MATERIALS

A. Telescopic Pond Net

Handy net with telescopic aluminium handle and knotless fine mesh, that will not harm specimens. Safe and durable. Net size is 20 cm in diameter, Telescopic Extendable Handle size is 50 cm - 100 cm.

735560 \$17.50

B. Student Insect Net

Designed for the student to effectively capture land bound insects and small aquatic creatures. 8" square steel hoop, 6" deep mesh capturing bag, soft 1/32" mesh grid size, and 20" high-grade knotless pine handle.

SB43411M \$11.25

C. Telescopic Sweep Net

Deep insect net with telescopic aluminium handle and high quality mesh which is kind to delicate specimens. Suitable for use at all levels. Net size is 72 cm x 30 cm in dia. Telescopic Extendable Handle size is 50 cm - 100 cm.

735561 \$19.90

D. Student Butterfly Net

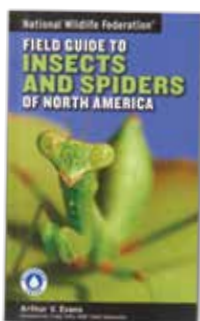
Designed for the student to effectively capture butterflies, moths, and other winged insects. 12" steel hoop, 28" deep mesh capturing bag, soft 1/32" mesh grid size, and 20" high-grade knotless pine handle.

SB43413M \$24.85

E. Insect Net

A nylon insect net that extends from 18" to 32" with a 48" L conical net mounted on a 14" ring.

C33048M \$17.95



National Wildlife Federation®

Field Guide to Wildflowers of North America

From Acanthaceae to Zygophyllaceae, this portable volume with waterproof cover provides the common and scientific names for each flower family; information on the flowering season; leaf, stalk, and blossom descriptions with measurements; and colour range maps.

672 pages.

SB52548M \$29.95

National Wildlife Federation® Field

Guide to Insects and Spiders of North America

The most up-to-date photographic field guide of its kind! Learn to identify over 940 different insects, spiders, and related species quickly and accurately. 496 pages.

SB52547M \$29.95

Two-Way Viewer Microscope

Allows students to view an object from two different angles, top and bottom, through magnifying lenses. Small objects such as insects and plants can be placed in the slide tray. Two students can view the object at the same time. Comes with instructions for several experiments.

49066 \$19.80



Explore Scope

This microscope features soft, rubber hand grips, a breakaway neck strap, perfect-fit goggles, and 8x magnification for up-close examination of everything from rocks and leaves to rolie pollies

- Encourages scientific exploration and discovery
- Introduces the wonderful world of life science
- Includes scope with 8x magnification, perfect-fit goggles with enlarged eyepieces, break-away strap, soft rubber hand grips, and telescoping barrel with 15x magnification for distance viewing
- Magnification and field of vision designed specifically for preschoolers' level of perception
- The ONLY combined microscope and telescope out there!

731927 \$36.50

Micro Box Magnifiers

For viewing insects, rocks, coins, stamps, etc. The bottom is a container and the lid is a 3X magnifier.

03820 Small, 1" x 1" x 7/8" \$2.20

03821 Large, 1½" x 1½" x 1½" \$5.10



Mini Bug Box

Crystal-clear plastic container includes a magnifying lid with air holes and a sizing grid.

21207 \$8.00



Specimen Mounts

A great addition to your classroom. With excellent labeled specimens & life cycles.

78794 27 pcs **\$470.70**

78796 16 pcs **\$359.45**



What's an Insect

Amazing preserved specimens display the differences between insects and other Arthropods. With comparison card. Box size 230 x 175 x 38cm.

731158 **\$84.55**



Resin Casting Specimen Mount Kit

Includes one 4-oz. mold release, one rectangle mold, one dome mold, and 32-oz. of clear casting resin.

9726894M **\$76.75**

Medium Real Bug® Specimens

74 x 40 x 20mm. An excellent way for children to see insect parts with these durable specimens.

78774 Stag Beetle

78776 Chrysomella

78780 Spider

78782 Rhino Beetle

\$10.65 each

Large Real Bug® Specimens

43 x 110 x 30mm. These durable, acrylic encased insects let your class visually examine insect parts and study different insect species.

79722 Stag Beetle

79726 Praying Mantis

79728 Stick Bug

79730 Grasshopper

730028 Centipede



Bug Rubbing Plates

6 detailed plates for rubbing ingenious insects. Add beautiful bugs to art activities! 18 x 18cm.

65640 **\$15.95**

True Insect Rubbing Plates

11 x 17cm. Pack of 16.

731166 **\$16.45**



What's that Bird? A Beginner's Guide

Perfect for beginning birders, What's That Bird? Is an indispensable pocket guide that includes full-colour photographs and illustrations of more than 150 common birds, and instructs bird watchers how to identify different birds and how to tell them apart. 128 pages.

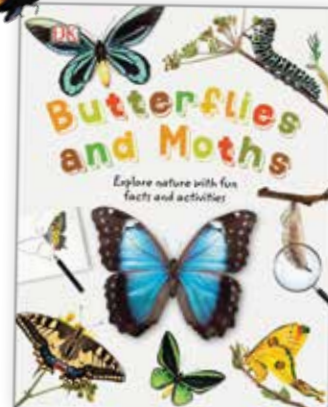
735101 **\$12.95**



Butterflies and Moths: Explore Nature with Fun Facts and Activities

Explore butterfly habitats and find out all about how butterflies work, from wings to feet. With exciting activities, like how to make a butterfly kite, and plenty of fun facts, this book is a must for children curious about butterflies and moths. 64 pages.

735096 **\$12.95**



BIOLOGY

LIVE MATERIALS

Student Bacteria Experiment Kit

Conduct bacteria experiments including: clean hands vs. dirty hands, dog mouth vs. human mouth, clean mouth vs. dirty mouth, and testing common items around the school or home. Kit contains two 200 ml bottles of prepared nutrient agar, 20 gamma radiated sterile petri dishes, 10 sterile swabs, and four lab instruction sheets. Kit is sufficient for individual experiments or can be used with four groups of 5-6 students.

SB39237M \$77.65

Prepared Nutrient Agar Only. 200 ml.

SB51073M \$19.35



SB39237M

1. Drosophila Culture Vials

Shatterproof plastic, 1¼" x 4".

SB11136M \$1.55

2. Drosophila Culture Screens

Plastic screens to increase surface area and keep flies off of media where young are developing.

SA02409M \$0.55

3. Drosophila Vial Plugs

Plastic foam plugs which can be autoclaved. Fits SB11136M vials or vials with diameters from ¾" to 1¼".

SA02408M \$0.95

4. Drosophila Vial Caps

Plastic breathing caps useful for controlling moisture and securing cultures against accidental opening. Made for use with SB11136M Drosophila Culture Vials and SA02408M Drosophila Culture Vial Plugs.

SB10440M \$0.45

Protozoan Pond Kit for Microscope Study

Remarkable dry mixture produces up to 20 different species of protozoans. Hatching starts two to five days after placing in water. Can be used as a substitute for living cultures. Always available for teacher's use with shelf life of about two years. Instructional leaflet included. Pack of 4 units.

732058 \$25.85 kit

NASCO Gram Stain Kit

Students learn to differentiate between gram-positive and gram-negative microorganisms using this kit. Materials included in gram stain kit: 30 ml each of Crystal Violet Solution, Gram's Iodine Solution, Alcohol/Acetone Solution, and Safranin (counter-stain) Solution.

SB30104M \$34.35

Petri Dish Starter Kit with Agar

All the elements beginners need to start learning how to prepare and utilize their petri dishes to grow bacteria. Includes two petri dishes with 3 g of agar, plastic tweezers, and instructions. Dishes measure 2¼" in diameter.

SB45545M \$5.85



Inoculating Loop

Consists of a 3" long, 25-gauge nichrome wire with a loop at one end and the other end mounted on an 8" aluminum handle.

SB47542M \$2.75 each



BioQuest® Protozoa Discovery Kit

Students will prepare viable protozoan cultures from dry media containing encysted protozoans. Explore the cultures and observe different forms of protozoans and various methods of locomotion. Learn to compare the biodiversity of protozoans and how they fill a niche in a larger living world. Includes: four vials of protozoa nutrient, 12 dropping pipettes, 12 concave and 12 flat slides, box of cover slips, two 8-oz. culture jars, one bottle of "slowing solution," six petri dishes, protozoa identification illustrations, facts sheet questionnaire, Golden Guide to Pond Life book, and student teacher's guides.

SB29115M \$77.65 kit

BioQuest® Introductory Culture Kit

Flies Not Included.

Includes 25 culture vials, 25 vial caps, 25 plugs, 25 screens, 1½lb. NASCO-Mead medium (enough for 60 cultures), one anesthetizer, a camel hair brush, and instructions.

SA06356M \$98.25



Life Cycle Rummy Card Game

Fast and easy sequence-based card game to test and reinforce life cycles. Includes frog, butterfly, flowering plant and turtle life cycles. Includes instructions. 48 cards. Bilingual in English and French.
735256 \$7.25 pkg.

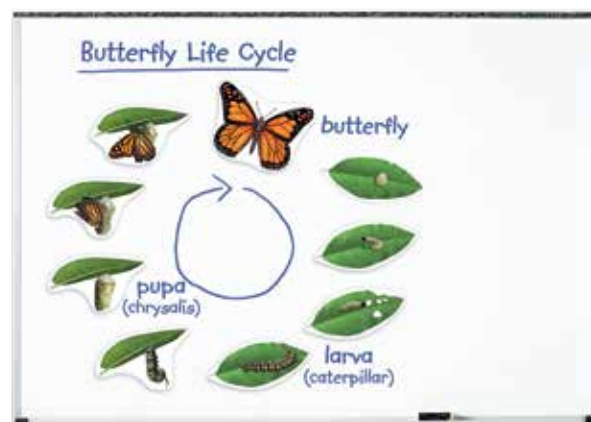
Make Learning
FUN
with
LIFE CYCLE RUMMY CARDS



Butterfly Farm™ Square Pop-Up Cage

Allow your students to watch butterflies in the classroom with these fully-enclosed terrariums. Features include one clear vinyl full side window for unobstructed viewing, large protected zipper opening for easy access, and five fine mesh walls to keep out butterfly predators. Lightweight, collapsible design is perfect for field work, and when collapsed, fits easily into most purses or backpacks. Netting absorbs moisture to keep contents dry. Washable.

16½" x 16½" x 30"
SB46624M \$17.05
27" x 27" x 48"
733490 \$25.60



Giant Magnetic Butterfly Life Cycle

Set of 9 magnets with detailed stages of the butterfly life cycle. Perfect for whiteboard use, Label-free for versatility. Similar to the Magnet Frog Life Cycle. Guide includes detailed information about each of the steps. Size of largest piece: about 9" x 7".

733540 \$34.40



Life Cycle Specimens

77622 Butterfly \$68.65
76648 Honeybee \$68.65



Chick Life Cycle

A hands-on model that shows the real thing! This set of 21 plastic eggs opens up to show the stages of a chick development (one egg for each day) as it is incubated. Each egg shows one day of chick development. The last egg opens up to reveal a small plastic chick. Includes: activity guide.

732372 \$51.70



BIOLOGY

INSECTS & LIFE CYCLES

(A)



(C)



(B)



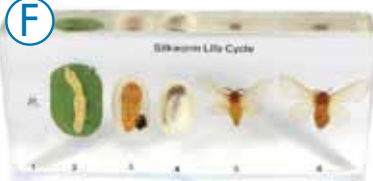
(D)



(E)



(F)



Life Cycle Specimens

A. 733332 Fly \$34.45

B. 77621 Cockroach \$41.20

C. 77620 Dragonfly \$49.20

D. 77619 Grasshopper \$55.95

E. 78790 Cabbageworm \$52.55

F. 78792 Silk Worm \$49.60



Ant, Butterfly & Ladybug Life Stages

The hidden life cycles of nature's most fascinating creatures come to life with these amazing soft plastic figures. The four stages of the ant, butterfly, and ladybug life cycles have been accurately sculpted and painted. Mix them up and have your kids put them in correct order!

731152 Ant \$17.50

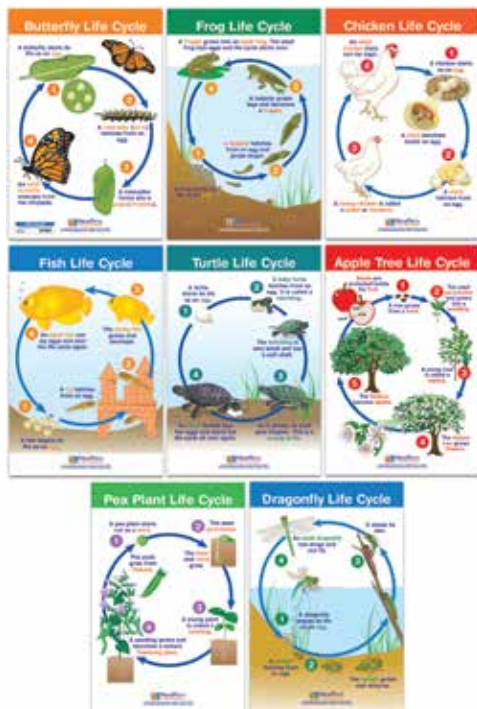
731154 Butterfly \$17.50

731156 Ladybug \$17.50



Life Cycles Bulletin Board Chart Set of 8

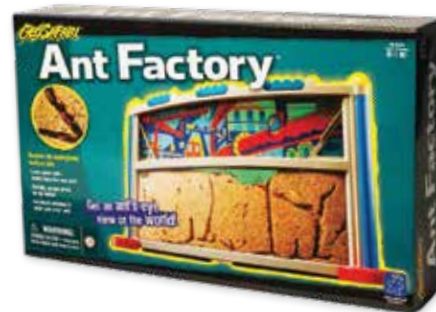
This 8 bulletin board set includes a collection of separate posters, each covering a separate, curriculum topic. Uniquely designed, while one side can be posted for student reference, the reverse features dry-erase activities perfect for individual student review or as a learning center activities! Graphic images and hands-on activities combine to provide comprehensive coverage of essential student skills. Each 12" x 18" Chart is laminated and double-sided.



The Life Cycles Bulletin Board Chart Set includes the following 8 charts:

- Butterfly Life Cycle
- Dragonfly Life Cycle
- Pea Plant Life Cycle
- Apple Tree Life Cycle
- Turtle Life Cycle
- Frog Life Cycle
- Fish Life Cycle
- Chicken Life Cycle

735692 \$79.95



GeoSafari® Ant Factory™

It's easy for young entomologists to set up and maintain their own ant habitats with this Ant Factory. Observe insect traits, behaviour, and survival needs.

731930 \$69.95

GeoSafari® Day 'N' Night Ant Factory

Get a firsthand look at the amazing working world of ants with the Day 'N' Night Ant Farm. The translucent, nutrient-rich, farm gel doubles as food ants can work with while they eat, eliminating the need for food or water. Witness their amazing feats by day, then switch on the colour-changing LED lights and watch as the ants work the nightshift. Custom air vents keep ants safe and ventilation flowing throughout their workspace.

731860 \$69.95





A. What is Hibernation?

One of nature's greatest miracles, hibernation allows animals to sleep through periods of extreme cold (and heat). From the tundra to the desert, this ability enables animals to live in some of Earth's harshest climates. Full-colour photographs and vivid text combine to give children a view of the many different ways that animals "sleep it off". 32 pages.

72838 \$19.95

B. What is Migration?

From whales and deer, to butterflies and eels, animals migrate to breed, feed, stay warm, find water, and even fall asleep! In each case, animals follow paths that have been passed on for generations, helping their species survive. Journeys include the Arctic tern, salmon, lemming, and Canada goose. 32 pages.

72840 \$19.95

C. Diversity of Living Things

Students will classify organisms in the animal kingdom. They will observe & describe similarities & differences among species, from mammals to microscopic organisms. Curriculum guide 96 pages, 35 activities.

79770 \$22.00

D. Growth & Change in Animals

Students will become familiar with the six animal groups and the animals within each group. They will classify animals and understand the major physical and behavioral characteristics that enable animals to survive. Gain an understanding of metamorphosis and become familiar with the life cycles of various animals. Students will learn how humans affect animals and how animals adapt to different environmental conditions. 40 activities, 96 pages.

76668 \$22.00



Food Web Collapse Game

This uniquely inventive and fast-moving strategy game teaches students about the structure and function of food webs. Students control the initial number of animals at different levels of the food web, with the goal of avoiding local extinctions. It takes only 10-15 minutes to play one round. The game aligns with all state standards for teaching about food webs. Includes guide sheets, cards, stickers, and instructions. For up to 30 players.

SB47891M \$68.05

All About Animals Poster

A visual overview of the characteristics, functions & structure of animals; animal symmetry; and the major animal groups. Large, reference poster features detailed illustrations to facilitate comprehension of key, standard-based concepts. Poster is 23" x 35" and is laminated for years of use!

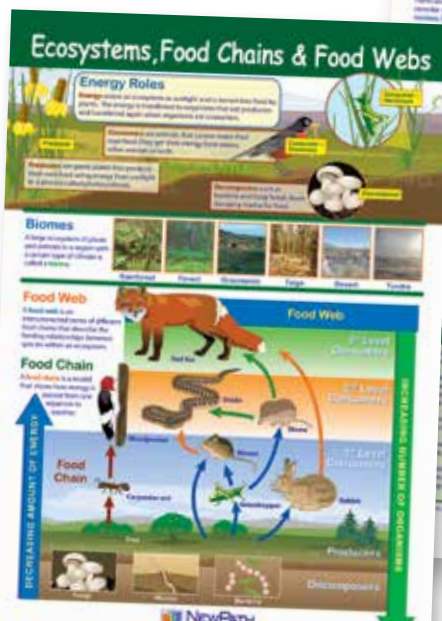
731045 \$29.95

Six Kingdoms of Life Poster

731043 \$29.95

Food Chains & Food Webs Poster

731042 \$29.95





Life/form® Bucket of Scat

A collection of various Life/form® Scat Replicas contained in one bucket! Each replica is a scat of a common North American animal. Includes 13 replicas.
SB49923M \$134.45



Animal Tracks Rubbing Plates, Set of 16

This hands-on, easy product is sure to enhance learning concepts. Add texture to artwork by placing paper over a plate and rubbing with a crayon, marker or pencil to make the design emerge. Great with paper maché. Simple fill tray and let dry. Peel the resulting mold off and your done. Each set includes a guide. 10 cm x 14 cm.
731611 \$18.45



Animal Tracks

Match the animal to their tracks while playing concentration, bingo, and guess the tracks game. Comes with 80 high quality and colourful cards, a plastic storage tray, and detailed instructions for three games.

732944 \$21.05



Animal Bites™

This kit is designed to teach about the diversity of diet within the animal kingdom. It is ideal for the exploration and teaching of the differences and adaptability that occur in nature. Included are samples from each group: herbivore (beaver, mountain gorilla, hippo), carnivore (coyote, Africa lion, alligator), and omnivore (human, grizzly bear, baboon). Each is an excellent representation of its respective group. A set of classroom-tested lesson plans and interactive exercises accompany each tooth kit. Enables you to easily carry out an efficient and thought-provoking learning experience.

731116 \$178.35



visit
spectrumed.ca
for
MORE DETAILED
INFORMATION



Flip Charts

The Six Kingdoms of Life
732942 \$59.95
All About Animals
731840 \$59.95
Food Webs Flip
731837 \$59.95
Biomes & Their Food
Webs Exploring Nature
731838 \$59.95
Kingdoms of Life
731835 \$59.95
Classification of Living Things
731833 \$59.95
Biomes Flip
731831 \$59.95

Six Kingdoms Study Card Set

Standards-based review cards provide a comprehensive review of 25 key topics with 30 questions each - a total of 750 self-correcting, illustrated study questions. The set also features a Resource/Instruction Card with suggestions for use in group and individual settings as well as a Classroom Presentation/Assessment CD featuring interactive flash cards for Interactive Whiteboard or computer use.

Detailed coverage of the following standards-based topics:

- The World of Life Science
- Diversity of Life
- Ecosystems, Food Chains & Food Webs
- Evolution & Classification
- The Six Kingdoms of Life
- Evolution & Interaction
- Bacteria & Viruses
- Protists & Fungi
- Microorganisms I & II
- Introduction to Plants
- Plant Structure & Function
- Plant Processes
- Plant Reproduction
- Plants Responses & Adaptation
- Plants With & Without Seeds
- Introduction to Animals
- Invertebrates I & II
- Vertebrates I & II
- Sponges, Cnidarians & Worms
- Mollusks, Arthropods & Echinoderms
- Fishes, Amphibians & Reptiles
- Birds & Animals

731029 \$94.50

What's Inside Animals

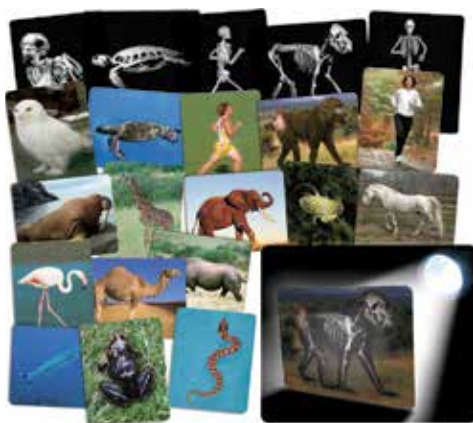
16 beautiful animal images, including 2 human images - place them on a light table or window to reveal the skeletal system of the animal! Flip the cards over to get a better look at the skeleton. Special scratch-resistant coating. 20 x 25 cm cards with Teacher's Guide.

444296 \$31.50

Animal X-Rays

14 X-rays and 14 matching photo cards, up to 8" x 10" (20 x 25 cm) and teacher/parent guide. Perfect for use on light tables.

77804 \$25.95

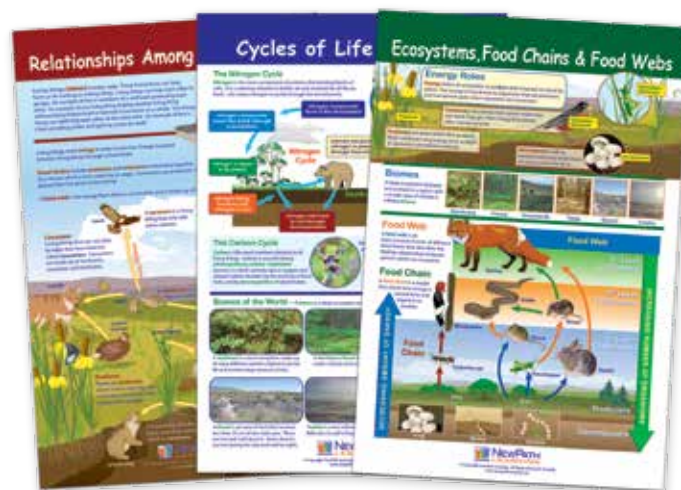


Spectrum's Animal Investigation Kit

Investigate Animals! This kit includes "What's Inside Animals" cards, Animal Tracks cards, and rubbing plates stamps, food chain game, and Animal Bites. All in a plastic storage tote.

730685 \$379.92

Exclusive
KIT



Ecology Bulletin Board Chart Set

Each Bulletin Board Chart Set includes a collection of separate posters, each covering a separate, curriculum topic. Each 12" x 18" Chart is laminated and double-sided - Side 1 features a graphic overview of the topic and Side 2 provides "write-on/wipe-off" activities.

The Ecology Bulletin Board Chart Set includes the following charts:

- Ecosystems, Food Chains & Food Webs
- Cycles of Life & Biomes
- Relationships Among Living Things

731807 \$19.95

Diversity of Life Bulletin Board Chart Set

Includes the following charts:

- Diversity of Life
- Microlife - Bacteria, Fungi & Protists
- Introduction to Plants and Animals
- Mammals & Birds
- Fishes, Amphibians & Reptiles
- Mollusks, Arthropods & Echinoderms
- Sponges, Cnidarians & Worms

731808 \$44.95



BIOLOGY

HABITATS



Creature Seeker Pond Student Kit

With this inquiry-based student kit, students will use microscopes and photographic keys to identify creatures in the water, relate organisms found to the health of the ecosystem, keep records of their results, and more. Includes: one field trip collection container, student insect net, one 3½-gal. pail, nylon pipette, four petri dishes, four plastic spoons, four 3-oz. plastic cups, one two-way microscope, four hand magnifiers, 8" x 12" plant trays, one plastic forceps, one dry-erase marker, one nylon ladle, three different laminated keys to macroinvertebrates sheets, and collection instructions.

732346 \$104.05

Kritter Keeper with Lid

For hamsters, gerbils, tropical fish, turtles, frogs, and snakes. Portable tank with an easy carry handle. Features vented cover and flip-top feeder. Critters not included. 1 gal. 8" x 5"

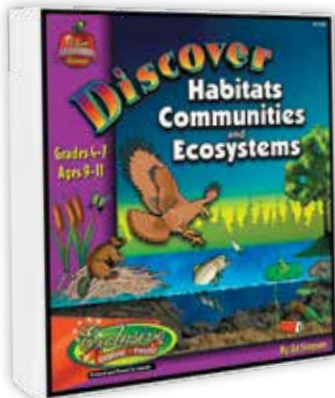
731126 \$13.25



Discover Habitats, Communities and Ecosystems

The challenges in this resource range from identifying the elements in a simple food chain to interpreting complex food webs and nutrient cycles. Students look at ecosystem interactions and examine species extinction. Activities on biomes, niches, succession, and changing habitats. This resource also contains a section on ecosystem games and activities on the role of humans in the balance of nature.

72854 \$49.95



new

Animal Habitats Game

Learn about contrasting habitats and the animals that live in them with this fun game. Two games in one with the double sided game boards. On the habitat side of the board, players pick up cards, try to identify the habitat belonging to the animal and check the answer on the reverse of the card before placing it on the board. On the habitat bingo side of the board, players spin the spinner and pick a card to match the habitat, before placing it on their board. Ideal for teaching children to compare animals in familiar habitats with animals found in less familiar habitats (coast and woodland with polar and desert). Teachers' notes include detailed facts such as animal type, diet, life expectancy, species as well as quirky fascinating facts. Cut out photocopyable animals are also included covering both animals in the featured habitats and animals in different habitats for follow-on discussion activities.

735689 \$39.50



GeoSafari® Jr Critter Habitat

This super-sized critter habitat is perfect for curious little learners and junior nature enthusiasts! Collect and observe bugs, frogs, fish, rocks, leaves, flowers, and more.

- Gallon sized clear, water-tight plastic container with air holes
- Exclusive rotating feeder pulls out for quick and easy feeding
- 1 Critter catching net
- 4 Magnifiers (4.5x, 3x, 2, 1x)
- Supports 2 habitats: wet and dry (with separator in base)
- Rubber grip handle, perfect for little hands, locks lid/roof onto container
- Downloadable guide for care instructions

730720 \$68.80



Habitats

Activities include: What is Ecology?, Earth's Biomes, Habitat is Home, Food Chains, Plants are Producers, Each to its Niche, and more! Skill lists, teacher suggestions, resource lists, evaluation sheets, cross-curricular activities, and answer key included. 104 pages.

68994 \$22.00





Scienceware® Write-On™ Label Tape

Adheres to any clean surface. Peels off without leaving a sticky residue. Pencil, ball-point pen, or solvent ink marker remain legible under the most demanding laboratory conditions. Resists moisture and most solvents. Holds up under 492° F for 30 minutes or 176° F for 24 hours and can be used down to -99° F. 40 yds. 3/4" W.

SB39273M White SB40946M Green
SB39274M Red SB40947M Blue
SB39275M Yellow SB40948M Orange
Each \$23.15

Set of 6. Includes one each of white, red, yellow, green, blue, and orange.

SB40949M \$123.35

Hot Hand® - Scienceware®

A unique, silicone-rubber molded hand protector for safely gripping hot beakers, flasks, bottles, and similar objects. Withstands temperatures up to 500° F (260° C); useful for work with cold objects, retaining its flexibility down to -70° F (-57° C). The end pockets for thumb and fingers fit any size hand. Gripping surface is studded for positive grip. Convenient hole tabs for easy hanging. 3-7/8" x 7-1/2" (98 mm x 190 mm).

SB01889M \$27.85

SCIENCEWARE® Clavies® Biohazard Autoclave Gloves

Unload your autoclave safely. Soft, pliant, all-cotton terry cloth gloves are superb for handling hot objects out of the autoclave or oven. Heat resistant up to 232° C (450° F), they replace hazardous asbestos gloves. Gauntlets in two length provide wrist and forearm protection, and the bright orange colour offers high visibility. Machine wash, tumble dry.

NOTE: Gloves are not waterproof and cannot be used to handle dry ice.

13" Gloves.

SB39277M \$52.35

18½" Gloves.

SB39276M \$64.75



Bench Top Safety Cabinets - SciMatCo

High-quality, low-cost, wooden storage cabinets are designed to fit most school science departments and are in full compliance with OSHA and NFPA requirements. Constructed of 1" multi-ply plywood and finished with multiple coats of chemical resistant paint. Internal metal lock with two keys. Cabinets measure 21-1/4" H x 16-3/4" W x 15-3/4" D. Shipped truck directly from factory. Allow extra delivery time.

Corrosive Cabinet. Printed with

"CORROSIVE."

Z15886M \$1,033.75

Flammables Cabinet. Printed with

"FLAMMABLE - KEEP FIRE AWAY."

Z09283M \$804.75

32-oz. Double Wall Station

The double wall station contains two 32-oz. squeeze bottles of Eyesaline® solution for immediate use.

SB37358M \$89.65

Single Unit Eyewash Wall Stations

16 oz

SB37353M \$55.75

32 oz

SB37355M \$63.55

32-oz. Eye/Face Wash Refill Bottle

Refill either the 16- or 32-oz. Single Unit Eyewash Stations above with this bottle containing Eyesaline® Solution with extended flow nozzle sealed for protection with a twist-off tab.

SB37357M \$21.55



SB37358M



Ultraviolet Sterilization Goggle Cabinets

Cabinets designed for use in schools where reuse of laboratory safety goggles and earphones presents a health hazard. It provides dry sterilization using ultraviolet radiation. When the doors are closed and locked, the interior can be flooded with ultraviolet light. All bacteria or microorganisms within the cabinet are killed. The door has a key lock safety closure, and the ultraviolet lamp is automatically shut off when the doors are opened. A built-in 15-minute automatic timer controls the sanitizing period desired. 24-gauge steel cabinet. Operates on a 110V AC with a 3-wire grounded cord. Special aluminum reflective interior surface insures complete sterilization of cabinet and goggles. UL approved.

30-Goggle Model. Measures 24-1/2" x 28" x 9-1/4". Supplied with a rack to hold

30 pairs of goggles. White, baked enamel.

Z10400M \$1,194.55

40-Goggle Model. Measures 30" x 30" x 12". Supplied with a rack to hold 40

pairs of goggles. Avocado, baked enamel.

Z11880M \$1,482.95

Replacement Bulb.

SB20258M \$65.25

Additional shipping charges apply.



LAB SUPPLIES

SAFETY



LATEX FREE!

Visorgog Economy Safety Goggles

- Fits over glasses
- Meets ANSI Z87.1 standards
- Clear frames and lenses
- High impact
- Latex-free

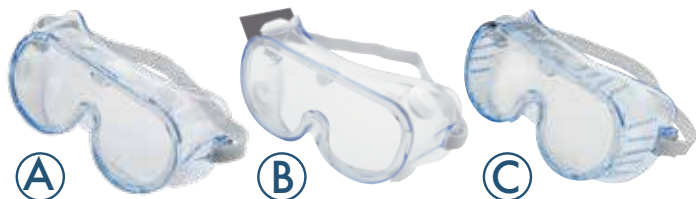
SB46877M Green \$15.85



Odyssey® II Chemical Splash Goggles

- Scratch-resistant, anti-fog lens
- Great panoramic view
- Indirect ventilation
- UV-absorbing polycarbonate
- Comfortable and snug fit; adjustable strap
- Fits over prescription eyewear
- Meets ANSI Z87.1-2003 standards as well as ANSI+ high impact standards

SB47688M \$24.05



A. Chemical Splash Goggles

- High-quality PVC frame
- Polycarbonate lens
- Indirect ventilation
- Meets ANSI Z87.1 standards

04691 Standard \$5.85

08574 Junior \$4.50

B. Fog-Free Chemical Splash Goggles

- High-quality PVC frame
- Polycarbonate lens
- Indirect ventilation
- Fog-free coating
- Meets ANSI Z87.1 standards

SB06969M \$13.25

C. Impact Goggles

- One-piece polycarbonate lens
- Frame is perforated for full ventilation
- Direct ventilation
- Meets ANSI Z87.1 standards

SB25323M \$3.05



"Over Glasses" Safety Eyewear

These frames easily slip over your regular prescription eyeglasses. Black frame with clear, anti-fogging, polycarbonate lenses and wraparound protection. Meets ANSI Z87.1+ standards. Provides 99.9% UV protection.

C29707M \$17.75

Economy Safety Glasses

- Wide, single-piece lens
- Adjustable temples provide a secure, comfortable fit
- Made of durable polycarbonate
- Meets ANSI Z87.1 standards
- Available in assorted frame colours

SB32854M Blue Frame

SB39510M Black Frame

SB39511M Burgundy Frame

Each \$5.25



Best SELLER

sellstrom

Sellstrom® Sebring® 400 Small Size Safety Glasses

- Black frame
- Wide, single-piece lens
- Adjustable temples provide a secure, comfortable fit
- Made of durable polycarbonate
- Meets ANSI Z87.1 standards

SB39512M \$5.35



Visitors' Glasses

- Ruggedly built to meet most semi-hazardous conditions
- Can be worn over glasses
- Wraparound side shields.
- Meets ANSI Z87.1 standards

78314 \$3.15

5" Elementary Fluorescent Safety Goggles

Designed to fit the size and needs of elementary students, these 12.7cm goggles provide the same level of protection as full-size goggles. Polycarbonate lens with fluorescent frame. Both lens and frame are ANSI Z87.1 certified.

730144 Fluorescent Pink

730146 Fluorescent Blue

730148 Fluorescent Yellow

730150 Fluorescent Green

730152 Fluorescent Orange

Each \$7.05

6" Secondary Fluorescent Safety Goggles

SB46952M Pink

SB46951M Blue

SB46954M Yellow

SB46950M Green

SB46953M Orange

Each \$7.55

6" Secondary Splash Goggles, Indirect Ventilation

SB46957M Pink

SB46956M Blue

SB46959M Yellow

SB46955M Green

SB46958M Orange

Each \$9.05

6" Secondary Fluorescent Safety Goggles, Set of 5

Set includes one each of pink, blue, yellow, green, and orange.

SB46929M \$24.05



SAFETY
Protection from impact





1. Knee-Length Lab Coats

Lab coats that combines style, comfort, and value. Made of 65% Dacron® and 35% finely combed cotton to withstand many launderings. Features a lapel collar; double-thickness cuffs; adjustable belt in back; upper left pencil-seamed breast pocket; two deep, roomy lower pockets; side slit openings; and buttons. Wash and dry. White. Fabric U.S.A.

Men.

SB48048M Small (36)
SB08098M Medium (40)
SB08099M Large (44)
SB08100M X-Large (48)
 Each \$36.65

Women.

SB10912M Small (34)
SB10913M Medium (40)
SB10914M Large (42)
 Each \$36.65

2. Tie-Dye Lab Coats

Brighten up any classroom or laboratory setting with these colourful lab coats! Large, vibrant patterns are great for identifying teachers or group leaders in a crowded classroom. Knee-length with full sleeves. 100% cotton.

SB47090M Large (44)
 Each \$74.45

3. Unisex Lab Coats

Quality lab coats made with soft and fine quality poplin fabric. Coats feature a high cotton content, which makes them more breathable and moisture absorbent, keeping you cooler and more comfortable as you wear them throughout the day. 80% polyester/20% cotton. 42" L.

SB47454M X-Small \$32.00
SB47455M Small \$32.00
SB47456M Medium \$32.00
SB47457M Large \$32.00

SB47458M X-Large \$32.00
SB47459M 2X-Large \$32.00
SB47640M 3X-Large \$32.00

4. Disposable Knee-Length Lab Coats

White, 44" L splash- and spray-resistant lab coats feature three pockets (one upper and two lower front), heavy-duty snaps, cuffs, and latex-free construction.

SB47104M Medium Each \$13.15
SB47105M Large

5. All-Purpose Disposable Aprons

These tough, smooth white aprons of 1.75-mil polyethylene are liquid-proof and acid-resistant. The cost per apron is often less than laundry expenses for cloth-type aprons, because they can be worn several times and then thrown away. The smooth surface makes it easy to wipe the apron clean. Measuring 28" x 45", these aprons cover most people below the knee, and the plastic ties and neckline band are designed for comfortable fit. Packed 100 aprons per dispenser box. Five dispenser boxes per case.

Per box of 100. **732564** \$72.15

Case of 500 aprons. **W05864M** \$245.55

Translucent Aprons

Translucent, 6mil thick plastic. Resistant to lab chemicals, acids, bases, oil and grease. Ties at waist and neck are reinforced with cloth tape. Re-foldable for storage.

Child size.
 24" wide x 30" long.
78694 \$7.50

Adult small.
 27" wide x 36" long.
78696 \$7.50

Adult med.
 27" wide x 42" long.
78698 \$7.50

Adult large.
 36" wide x 46" long.
78700 \$7.50



Laboratory Aprons

Black, chemical-resistant rubberized aprons. Flexible and lightweight. Available in four sizes.

24" W x 30" L Child's Size
SB37271M \$11.55 ea.

27" W x 36" L
SB37272M \$12.45 ea.

27" W x 42" L
SB37273M \$13.25 ea.

36" W x 42" L
SB37274M \$14.65 ea.



LAB SUPPLIES

SAFETY



Bucket with Handle and Lid
1-gallon bucket with sturdy handle and secure lid.

SB51396M \$6.75

SB51397M Bucket Only. \$4.85

SB51398M Lid Only. \$2.65



Laboratory Tray

Multipurpose polypropylene molded trays can be used for sterilizing, drying glassware, porcelain ware, and other laboratory supplies. These steam autoclavable trays have tapered walls designed for nesting. Tray measures 15" x 12" x 3".

SB47050M \$12.00



Clear Plastic Utility Tray

You'll find many uses for this utility tray in your classroom including: aquaria, root growth observation, critter container, chromatography, and more. Tray measures: 10½" L x 5" W x 3-12" H. Trays nest for compact storage.

SB27128M \$4.95

Lab Tray

Tray is lightweight and long lasting, with a smooth surface and seamless construction. Made of high-density polyethylene formula, engineered especially for maximum strength. Sand beige.

Size 19½" x 13½" x 4".

W05175XM \$19.25 ea.

Lid.

WA08862XM \$12.05 ea.



Vinyl Powder-Free

Disposable Examination Gloves

Provide a latex- and powder-free solution to hand protection. Made from a special synthetic component and soft PVC material, gloves are soft like premium leather, and are more elastic to fit snugly and comfortably for even the toughest job. 4 mil thickness.

731256 Small (Box of 100) \$38.00

731258 Medium (Box of 100) \$38.00

731260 Large (Box of 100) \$38.00



Poly Gloves - Latex-free

Economical, throwaway, taffeta-embossed gloves are ideal for laboratory work in biology and chemistry. Dispenser box of 100 gloves is always available, just like tissues.

Medium, Per box

51178 \$7.45

Large, Per box

2100321(X)M \$7.45



Adenna® Precision® Nitrile Powder Free Exam Gloves

Ultra-soft and super stretchy gloves reduce hand fatigue for maximum comfort. The textured surface provides a strong grip in both dry and wet applications. The gloves are thinner for maximum dexterity but very strong, bestowing superior barrier protection. 100% synthetic. Latex free. Box of 100 for sizes, small, medium, and large; box of 90 for size X-large.

SB48872M Small

SB48874M Large

SB48873M Medium

SB48875M X-large

Per box \$42.45



Adenna® Handy Guard® Powdered Latex Gloves

Disposable gloves that can be used in a variety of applications. These natural rubber latex gloves stretch and flex so that they fit comfortably and provide dexterity and tactile sensitivity. Powdered with edible corn starch for easy donning. Box of 100.

SB48876M Small

SB48877M Medium

SB48878M Large





Acid, Caustic and Solvent Spill Kit

Be prepared for spills in your lab. This kit contains enough material to clean up a liter of four different kinds of chemicals in your lab. Complete with instruction sheets and SDS.

Kit includes:

1100g Diatomaceous Earth (Flammable Absorbent Material), 1.0kg Acid Spill Cleanup Kit (Acid neutralizing Mixture), 1.2kg Spill Kit, Caustic Cleanup (Caustic Neutralizing Mixture), 200g Vermiculite (Absorbent), Splash Resistant Goggles, 24 Nitrile Gloves, 1 Dustpan and Brush Set, 1 Spill Kit Storage Container

2338M \$199.95



SB52071M



SB52072M



SB52074M

Absorbent Bench Liners

Protect bench tops, floors, and carts with this highly absorbent cover. Keep spills from spreading with waterproof backing that is resistant to most chemicals. Liners cushion the surface while absorbing liquids. Made of highly absorbent multi-layer tissue with a polypropylene backing.

20" x 50-ft. Roll.

SB52071M \$76.35

20" x 24" - 50 Precut Sheets.

SB52074M \$166.05

20" x 50-ft. Dispenser Box.

SB52072M \$88.85

Kimwipes® Delicate Task Wipers

Use for polishing glassware, cleaning instruments, or other delicate tasks. Extra low-lint wipers made from 100% virgin wood fibers. Soft, nonabrasive cellulose-fiber wipers won't scratch most delicate surfaces. Absorb many times their own weight. Handy one-at-a-time dispensing packs with special plastic guard reduce airborne lint, keep contaminants out of box, and reduce electrostatic discharge. White. Box of 280 wipers measuring 4-12" x 8-12".

SB44520M \$8.25



First Aid Kit

A first aid kit designed for use in classrooms, homes, offices, or anyplace with up to 25 people. Balanced assortment of top-quality first aid supplies. Contents: 32 adhesive strips (1" x 3"), adhesive tape roll (1/2 in. x 5 yds.), 2" gauze bandage, 4" gauze bandage, five gauze pads (3" x 3"), two eye pads, large wound pad (5" x 9"), triangular bandage, major wound bandage and compress, CPR barrier, three PVP iodine prep pads, three sting relief pads, 12 alcohol prep pads, 0.5-oz. eye flush, six first aid/burn cream packets, forceps, scissors, four latex exam gloves, and cold pack. Packaged in a weatherproof plastic case with a wall mounting handle/hanger. Complies with OSHA requirements and its contents meet ANSI Z308.11998.

SB13977M \$59.75



China Marking Pencil Pkg. of 12

Paper covered, self sharpening with pull string. Writes on all types of surfaces such as glazed pottery, glass, fabric, wood, paper, and more. The marks are water-resistant and colourfast, but still removable from monoporos finishes. Black.

9701022M Black \$13.85 pkg

SA04393M Red \$13.85 pkg

SA04394M Blue \$13.85 pkg

Aluminum Foil

Foil for use in schools and institutions. Perfect for science projects requiring a drying time. Lay down as a disposable, protective foil sheet to keep tables, desks, and countertops looking their best. Sturdy dispenser box.

12 in. x 200 ft. roll.

W09459M \$24.85



LAB SUPPLIES

TESTING

pHydrion Insta-Chek 0-13

This direct reading pH paper has the widest range (0-13) available in a single paper. Provides a simple, single colour match for all pH values. One paper gives 14 brilliant colours, giving instant pH checks over the entire range. The accurate, reproducible readings provide immediate response. Provides maximum convenience at a minimum cost per test.



1. Jumbo pHydrion Insta-Chek 0-13

A single-roll dispenser containing one 50-ft. roll of 1/2" tape and a colour chart.
SB13596M \$18.45

2. Standard pHydrion Insta-Chek 0-13

A double-roll dispenser containing two 15-ft. rolls of 7/32" tape and two colour charts.
SB13598M \$18.45

Standard Refill Package. Five 15-ft. rolls of 7/32" tape for SB13598M dispenser.
SB13599M \$39.75

3. Standard pHydrion Insta-Chek 0-13 - Dual Roll

A jumbo dual-roll dispenser containing two 50-ft. rolls of 7/32" tape and two colour charts.
SB13600M \$38.65

4. Mikro pHydrion Insta-Chek 0-13

A double-roll dispenser containing two 15-ft. rolls of 5/32" tape and two colour charts.
SB13602M \$15.25

Mikro Refill Package. Pkg. of five 15-ft. rolls of 5/32" tape for SB13602M dispenser.
SB10879M \$31.85

5. pHydrion Mikro Ultrafast 0-14

Dispenser features a combination of Insta-Chek 0-13 and Ultra-Sharp pH 12.5-14.0 test paper with over 250 dip-and-read tests on the narrow tape. A test requires only a fraction of a drop - 0.001 ml is enough. The convenient Mikro double-roll dispenser contains one roll of each test paper with matching colour chart. Each roll is 4 mm x 4.7 m (5/32" x 15 ft.), and each dispenser is individually furnished in a protective polypropylene case.
SB10878M \$13.85



Chemplate®

Eliminates the need for glassware and provides a semi-micro environment. Chemplate® can be a rack of numbered (1-12) test tubes; a gas generator; a reservoir for water; a safe and economical means to conduct experiments; a demonstration vessel which can be used on an overhead projector. Pkg. of 10.

SB19151M \$33.15 per pkg.

Hydriion pH Strips

Wide-range, general purpose test papers have a distinct colour match at full pH units 1-12. Accurate, reproducible readings with an immediate response. 100 paper test strips per vial. 4-1/2" x 3".

SB51250M Per vial \$5.45

SB51251M 10 vials. \$32.85

Jumbo pH Strips. 8" x 3-1/4". Pkg. of five.

SB51252M \$41.95



Buffer Solution Set

Use to calibrate your pH meters. 500 ml bottles. Grades 7-12.

Set of 4. Includes one each of the solutions below and electrode holding solution.

SB49246M \$37.65

Solutions.

SB49247M 4.00 pH, Red

SB49248M 7.00 pH, Yellow

SB49249M 10.00 pH, Blue

Each \$9.85

Porcelain Spot Plates

Great for observing chemical reactions. Economically priced.

6-Cavity Spot Plate.

3 1/2" x 2 1/4" x 1/2".

SB40727M \$2.95

12-Cavity Spot Plate.

4 1/2" x 3 1/2" x 9/16".

SB40728M \$8.25



Urine Test Strips

Multiple test strip for conducting urine tests for pH, glucose, ketones, and protein. 50 strips.



Hydriion Spectral Plastic 0.0-14.0 pH Strips

Conveniently packed in a flip-top vial, these premium-quality, wide-range plastic strips offer clear, bright, single-colour matches. Plastic strips are more durable than paper rolls. Dip the strip into the test solution, then instantly compare the resulting colour with the matching pH colour chart. Vial contains 100 strips. 1.0 interval.

SB48831M \$22.85



Hydriion pH Strips in Vials

These wide-range strips are 7/32" W x 2" L and are packaged in a glass vial with a colour chart. Hydriion A has a range of 2-4-6-8-10, and Hydriion B has a range of 1-3-5-7-9-11. There are 100 strips per vial, package of 10 vials.

SB10881M Hydriion A \$31.75

SB10882M Hydriion B \$31.75



Chromatography Paper

A thin, smooth, high-quality paper suitable for general analytical separations, electrophoresis, or chromatography requirements for educational use. The paper provides good resolution and a capillary rise of 24mm/min. Compares to Whatman No. 1 for filtration.

1 in. wide x 100 yd. Roll.

SB16079M \$61.95

Pkg. of 100 Sheets (18" x 22½").

SB20294M \$216.75



A. Filter Paper - Qualitative, Medium-Retention

Compares to Whatman No. 1 for filtration. Perfect for routine laboratory work and student requirements in general science, biology, and chemistry classes. Medium retention (6 µm) and flow rate (60ml/min.). Pkg. of 100.

B. Filter Paper - Qualitative, Fast-Filtering

Compares to Whatman No. 4 for filtration. A rapid-filtering grade with a flow rate of 235ml/min and retention of 24 µm. Crepe textured surface prevents precipitate from creeping. Pkg. of 100.



A.			
Cat. No.	Diameter cm	Price Per Pack	
SB16073M	5.5	\$6.75	
SB16074M	7.0	\$7.00	
SA04345M	9.0	\$7.05	
SA04346M	11.0	\$9.65	
SB15188M	12.5	\$11.75	
SA00253M	15.0	\$15.95	

B.			
Cat. No.	Diameter cm	Price Per Pack	
SA09104M	11.0	\$12.45	
SB16075M	15.0	\$20.55	



Test Papers

Supplied in stoppered vials of 100 strips (2" x ¼") per vial. 12 vials per pack.

Cat. No.	Description	Price Per Pack
SB16154AM	Cobalt Chloride	\$44.75
SB14759AXM	Litmus, Blue	\$17.85
SB14760AXM	Litmus, Red	\$17.85
SB10904AM	P.T.C. (control)	\$18.25
SB10902AM	Sodium Benzoate	\$40.65
SB10903AM	Thiourea	\$40.65



Wide-Range pH Paper

Provides distinct colour for each separate pH reading in the range of 1-14. 100 strips.

SB08261M \$5.45



pH Test Papers

100 pieces per vial.

Litmus Red

Turns blue when testing for bases.

02540 \$1.95

Litmus Blue

Turns red when testing for acid.

025401 \$1.95

Neutral

Used to test for acid or base. Changes to red for acids and blue for bases.

48340 \$1.84

Wide Range

Chart pH level according to colour chart provided (pH range 1-14).

48826P \$3.50



Vital Tool For
**CLASSROOM
PROJECTS &
FIELD TRIPS!**

OHAUS® Starter Pen Meters

With durable plastic housing, a protective cap that safeguards the sensor, and an automatic shutdown feature that preserves battery life, the meters can endure consistent use in rugged environments. Equipped with a single/dual display and a wrist strap that helps to prevent unintentional dropping. Constructed with an IP67 waterproof design that can prevent water damage when accidentally dropped into liquid. Requires four AG13 1.5V micro alkaline batteries (included). Minimum 200 hours of operation time.



Cat. No.	Description	Measurement Range	Resolution	Calibration	Each
SB49933M	pH Meter	0.0 to 14.0	0.1 pH	0.1 pH	\$119.53
SB49934M	pH Meter w/temp. display	0.00 to 14.00	0.01 pH	0.05 oH	\$218.40



LAB SUPPLIES

BEAKERS & VIALS



Set of 5 Glass Beakers

A best-selling starter set ideal for any laboratory. Includes one borosilicate beaker each of 50 ml, 100 ml, 250 ml, 600 ml, and 1000 ml.

SB45964M \$36.95



Plastic Beaker Set

Set of polymethylpentene beakers offers glass-like clarity with the durability of plastic. Includes five graduated beakers: 50 mL, 100 mL, 250 mL, 500 mL, and 1,000 mL.

SB51331M \$64.45



Economy Tri-Pour Beakers (PP-Polypropylene)

Temperature Tolerance -10° to 120° C.

07837 Set of all 6 \$22.40

07831 50ml \$2.00

07832 100ml \$2.40

07833 250ml \$3.60

07834 400ml \$4.70

07835 800ml \$5.90

07836 1000ml \$6.90



Nesting Graduated Beaker Set

Set of 5 unbreakable, plastic beakers with easy-to-read, blue calibrations. Sizes include 50 mL, 100 mL, 250 mL, 500 mL, and 1,000 mL.

72686 \$14.65



Dynalon Polypropylene Graduated Beakers

Straight-sided, translucent beakers are heat-resistant up to 135° C. Graduations and an indication of material and maximum heat resistance are printed in blue. Numerical graduations show approximate value (±5%). Autoclavable at 250° F (121° C). Durable polypropylene construction.

Cat. No.	Capacity mL	Subdivisions mL	Height mm	Price Each
SB19215M	50	5	51	\$3.85
SB19216M	100	10	62	\$5.35
SB19217M	250	25	82	\$8.05
SB24114M	400	50	95	\$8.25
SB19218M	500	50	102	\$9.45
SB24115M	600	50	107	\$10.55
SB19219M	1000	100	126	\$10.85
SB19220M	2000	100	160	\$14.65



Graduated Beaker Set

Straight-sided, translucent beakers are heat-resistant up to 120° C. A nested set of beakers including 50, 100, 250, 500, and 1000 ml. Numerical graduations show approximate value (±5%). Autoclavable at 250° F (121° C). Durable polypropylene construction.

SB19214M \$18.50

A. Plastic Vials with Caps

086021 31ml, each \$0.75

08602 31ml, Pkg. of 200 \$58.50

086001 71ml, each \$0.75

08600 71ml, Pkg. of 250 \$85.50

B. Bottles with Yorker Caps

Set includes 120ml, 240ml and 500ml PVC bottles, and 3 yorker caps.

13289 \$5.95





**KIMAX Beakers,
Glass, Griffin Low Form**
Graduated. With lip and pouring spout.

Cat. No.	Capacity mL	Price Each	Unbroken Shelf Pack	Price Each	Unbroken Case	Price Each
77434	10	\$7.00	12	\$6.89	24	\$6.75
77436	30	\$6.05	12	\$5.97	48	\$5.84
77438	50	\$6.00	12	\$5.92	48	\$5.80
77440	100	\$6.25	12	\$6.16	48	\$6.03
77442	150	\$6.15	12	\$6.06	48	\$5.94
77444	250	\$5.60	12	\$5.53	48	\$5.42
77446	400	\$7.35	12	\$7.28	48	\$7.13
77448	600	\$8.85	6	\$8.78	36	\$8.60
77450	800	\$12.35	6	\$12.17	24	\$11.92
77452	1000	\$16.55	6	\$16.34	24	\$16.01
77454	2000	\$32.55	4	\$32.16	8	\$31.49
77456	4000	\$85.00	6	\$83.00	-	-



**KIMAX Heavy-Duty
Beakers, Glass, Low Form**
Heavy construction increases life expectancy with hard usage in laboratory. Thick uniform walls throughout, and extra wall built into evenly tooled top portion. With lip and pouring spout. Graduated.

Cat. No.	Capacity mL	Price Each	Unbroken Shelf Pack	Price Each	Unbroken Case	Price Each
77458	250	\$11.50	12	\$11.35	48	\$11.12
77460	400	\$14.50	12	\$14.31	48	\$14.01
77462	600	\$16.95	6	\$16.78	36	\$16.44
SB14065M	1000	\$32.90	6	\$31.91	24	\$31.26
SB14066M	2000	\$73.50	4	\$65.18	8	\$63.84



**Economy Beakers,
Glass, Griffin Low Form**
Large marking spot for extra convenience. Made from low-expansion borosilicate with properties equivalent to ASTM 438 Type 1 Class A specifications. Double graduations with a limit error of $\pm 5\%$ of full capacity.

Cat. No.	Capacity mL	Price Each	Unbroken Shelf Pack	Price Each	Unbroken Case	Price Each
77468	50	\$2.85	12	\$2.62	192	\$2.57
77470	100	\$3.00	12	\$2.81	192	\$2.76
77472	150	\$3.10	12	\$3.01	192	\$2.95
77474	250	\$3.30	12	\$3.15	144	\$3.05
77476	400	\$4.10	12	\$3.49	72	\$3.42
77478	600	\$3.80	6	\$5.53	48	\$5.42
77482	1000	\$7.40	6	\$7.32	24	\$7.17
77484	2000	\$11.65	4	\$11.54	16	\$11.31



PYREX® VISTA™ Glass Beakers
An economical option manufactured to Corning/PYREX® standards featuring blue graduations and novel marking spot.

Cat. No.	Capacity mL	Price Each
732230	50	\$5.70
732232	100	\$6.00
732234	150	\$6.00
732236	250	\$6.05
732238	400	\$6.40
732240	600	\$8.30
732242	1000	\$14.90



**Corning® PYREX®
Griffin Beakers – Low Form**
Corning® beakers with spout are manufactured with uniform wall thickness and offer optimum balance between thermal shock resistance and mechanical strength. For convenience, the 250 through 4,000 ml beakers have a double-graduated metric scale to indicate approximate content. All sizes have an extra large marking spot.

Cat. No.	Capacity mL	Gradation Range mL	Gradation Interval (mL)	Each
SB42605M	30	5-25	10	\$6.10
SB42606M	50	10-40	10	\$6.15
SB42607M	100	20-80	10	\$6.35
SB42608M	150	20-140	10	\$6.45
SB42609M	250	25-200	25	\$6.55
SB42610M	400	25-325	25	\$7.00
SB42611M	600	50-500	50	\$8.75
SB42612M	1,000	50-1,000	50	\$14.60
SB42613M	2,000	200-1,800	100	\$48.00
SB42614M	4,000	500-3,500	250	\$93.20



**Corning® PYREX®
Heavy-Duty Griffin Beakers**
Heavy-duty beakers specifically designed to offer the best mechanical strength under harsh conditions, such as mechanized washing operations. The 150 ml beaker features a single graduated metric scale, and the 250-1,000 ml beakers feature a double graduated metric scale to indicate approximate content. Beakers have an extra large marking spot.

Cat. No.	Capacity mL	Gradation Range mL	Gradation Interval mL	Each
SB46669M	150	20-140	20	\$11.20
SB46660M	250	25-200/0-175	25	\$11.80
SB46666M	400	25-325/0-275	25	\$17.90
SB46663M	600	5-500/0-450	50	\$20.90
SB46657M	1000	50-1,000/0-950	50	\$46.95



LAB SUPPLIES

BOTTLES



Bottle with Dropper

High quality and durable, 12 oz. French square flint bottles have countless classroom uses. Features 20/400 bottle cap with dropper. Pkg. of 12.

SB51111M \$31.75

Polyethylene Dispensing Bottles

Bottles have dispenser tops and sealer caps. Seal for shipment and reseal after using. Sealer snaps on easily. Standard opening .030" (.76 mm).

Cat. No.	Capacity mL	Each
S08279M	60 mL / 2 oz.	\$2.40
S08280M	185 mL / 6 oz.	\$2.65



Media Storage Bottles

Ideal for culture media, chemicals, or solvents. These type 1 borosilicate glass, general purpose media bottles are autoclavable with permanent white imprinted graduations and marking spots. The screw thread opening has an ID of approximately 30 mm. The supplied cap is linerless and both the cap and drip free ring are polypropylene autoclavable to 284° F (140° C). Sets of 10.

500 mL
SB40879M \$126.80

Barnes Dropping Bottle Glass

30 mL with rubber bulb forming tight stopper.

SB01827M \$2.45



Single LDPE Wash Bottle

Through-the-top wash bottle with closure and stem molded in 1 piece for leakproof service. Tubing is flexible enough to angle the stream where needed. Tip dispenses uniform stream and can be cut back to increase the flow.

Specifications: Bottle made of low-density polyethylene (LDPE), Screw closures and stems made of polypropylene, Draw tube made of polypropylene copolymer.

Cat. No.	Capacity mL	Each
SB53264M	125 mL	\$5.70
SB53265M	250 mL	\$6.20
SB53266M	500 mL	\$7.20



Nalgene™ LDPE Drop-Dispensing Bottles

Convenient to operate one-handed, bottles feature tethered spout caps that snap securely in place and won't break away when bottles are squeezed. View liquid levels easily through the translucent walls and dispense one drop at a time for dependable, measured delivery. Low-density polyethylene bottles are chemically compatible with most acids, bases, and alcohols.

Cat. No.	Capacity mL	Closure	Each
SB51259M	30 mL	20 mm	\$7.10
SB51260M	60 mL	20 mm	\$8.40
SB51261M	125 mL	24 mm	\$10.20



Amber Dropping Bottle

Amber-coloured glass dropping bottle with rubber bulb and pipette. 1-oz. capacity. Pkg. of 12.

SB13996M \$17.70



Polypropylene Graduated Cylinders, Single Scale

Polypropylene surface creates no meniscus; raised numeral graduations make reading easier and more accurate. Hexagonal bases make cylinders tip proof and roll proof. Polypropylene has excellent chemical resistance and is autoclavable. 10 mL size has flared top.

Cat. No.	Capacity mL	Price Each
SB08686M	10 x 0.2	\$2.75
SB07277M	25 x 0.5	\$2.90
S00925M	50 x 1	\$3.60
S00926M	100 x 1	\$5.10
S00927M	250 x 2	\$7.20
S08307M	500 x 5	\$8.05
S08308M	1000 x 10	\$18.90
SB23629M	2000 x 20	\$36.85



Graduated Cylinders

Seven easy-to-read, plastic graduated cylinders made of durable, tough transparent polypropylene plastic with embossed calibrations for easy measuring. Excellent for all grades with the wide, stable bases. Chemical and acid resistant, autoclavable (dry heat up to 120°C and wet heat up to 80°C) and microwavable.

77858 7-Piece Boxed Set \$29.30

77860 10ml \$2.05
77862 25ml \$2.30
77864 50ml \$2.66
77866 100ml \$3.30

77868 250ml \$4.70
77870 500ml \$6.00
77872 1000ml \$8.70



Graduated Cylinders, Clear Plastic

Temperature Tolerance -20° to 85° C.

Six, clear, easy-to-read, plastic graduates with embossed calibrations for easy measuring. Excellent for primary grades with their wide, stable base.

07800 Set of all 6 \$55.60

07801 25ml \$5.30
07802 50ml \$6.40
07803 100ml \$7.60

07804 250ml \$12.70
07805 500ml \$18.70
07806 1000ml \$32.00

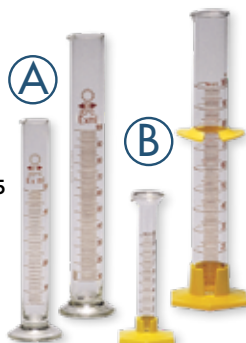
Graduated Cylinders, Borosilicate Glass

A. Single Scale, Round Base

48620 10ml, 0.2ml divisions, 135mm high \$3.75
48622 25ml, 0.5ml divisions, 140mm high \$4.20
48624 50ml, 1.0ml divisions, 190mm high \$4.90
48626 100ml, 1.0ml divisions, 255mm high \$6.80
48630 500ml, 5.0ml divisions, 375mm high \$16.85

B. Two-Part

48648 10ml, 0.2ml divisions, 132mm high \$3.50
48652 50ml, 1.0ml divisions, 185mm high \$6.20
48654 100ml, 1.0ml divisions, 248mm high \$6.90



Superior-Grade Cylinders, Graduated Double Metric Scale, with Bumper

Superior-grade glass cylinder. Double metric scale except for 10 mL and 25 mL sizes. Calibrated "to contain" permanent graduations, and to comply with Fed Spec. NNN-C-940 for "unserialized cylinders" tolerance limitations. Hexagonal bumper guard to prevent breakage and roll.

SUPERIOR GRADE CYLINDERS



Cat. No.	Capacity mL	Price Each	Unbroken Shelf Pack	Price Each	Unbroken Case	Price Each
SB17985M	10 x 0.1	\$12.25	4	\$11.88	48	\$11.64
SB17986M	25 x 0.2	\$16.50	4	\$16.01	48	\$15.68
SB17987M	50 x 0.5	\$17.60	4	\$17.07	48	\$16.72
SB17988M	100 x 1	\$18.65	4	\$18.09	48	\$17.72
SB17990M	500 x 5	\$46.95	2	\$45.54	12	\$44.60

Economy-Grade Cylinders, Single Metric Scale, with Bumper KIMBLE KIMAX

Student-grade, plastic base. All have bumpers except for 10 mL size.

Cat. No.	Capacity mL	Price Each	Unbroken Shelf Pack	Price Each	Unbroken Case	Price Each
SB08197M	10 x 0.2	\$8.55	6	\$8.29	24	\$8.12
SB08198M	25 x 0.5	\$11.15	6	\$10.82	24	\$10.59
SB08199M	50 x 1	\$11.25	6	\$10.91	24	\$10.69
SB08200M	100 x 1	\$14.55	6	\$14.11	24	\$13.82



Student-Grade Cylinder, Graduated Double Metric Scale, with Bumper

Student-grade. An economical glass cylinder with plastic hexagonal base and bumper to allow easy storage, less breakage, and lower cost. Calibrated "to contain." Plastic parts easily removed, colour may vary.

Cat. No.	Capacity mL	Price Each	Unbroken Shelf Pack	Price Each	Unbroken Case	Price Each
SB17991M	10 x 0.2	\$5.90	6	\$5.72	24	\$5.61
SB17992M	25 x 0.2	\$7.90	6	\$7.66	24	\$7.51
SB17993M	50 x 1	\$9.20	6	\$8.92	24	\$8.74
SB17994M	100 x 1	\$10.20	6	\$9.89	24	\$9.69



Unbreakable Graduated Cylinders

Made of tough, transparent plastic. Accurately calibrated on easy-to-read yellow background. Cannot be used for concentrated acids, bases, or stronger organic solvents. Plastic surface does not create meniscus. Large, stable base.

Cat. No.	Size	Each
SB07939M	10 mL	\$2.15
SB07940M	25 mL	\$2.55
SA02306M	50 mL	\$3.00
SA02307M	100 mL	\$3.15
SB28542M	250 mL	\$4.35

Graduated Cylinder Starter Set

Set includes 1 each of 10 mL, 25 mL, 50 mL, and 100 mL cylinders. Set of 4. **732558 \$12.00**



PMP® Cylinders, Dynalon

Graduated cylinders are single scale, crystal clear, and shatterproof, with raised numeral graduations. Wide bases make cylinders tip proof. Superior chemical resistance, heat resistance to 350° F (177° C); no meniscus.

Cat. No.	Capacity mL	Price Each
SB16307M	10 x 0.2	\$3.80
SB16308M	25 x 0.5	\$5.10
SB16309M	50 x 1	\$6.25
SB16310M	100 x 1	\$7.60
SB16311M	250 x 2	\$11.50
SB16312M	500 x 5	\$14.70
SB16313M	1000 x 10	\$22.60
SB23630M	2000 x 20	\$54.55



LAB SUPPLIES

TEST TUBES

Student Grade Test Tubes

Borosilicate glass of excellent chemical and physical properties. It is highly stable in structure and, as a result, has marked mechanical strength and very high resistance to chemical attack. Sold in shelf packs.

13 x 100mm, 9ml	18 x 150mm, 27ml
487041 Pkg. of 12 \$5.95	487101 Pkg. of 12 \$7.95
48704 Pkg. of 72 \$36.00	48710 Pkg. of 72 \$47.00
15 x 125mm, 14ml	20 x 150mm, 34ml
487061 Pkg. of 12 \$5.95	487121 Pkg. of 12 \$11.95
48706 Pkg. of 72 \$39.00	48712 Pkg. of 72 \$66.20

Stoppers.
Assorted package of 48.
00607 **\$40.85**



Kimble KIMAX® K6-33 Glass Test Tubes, with Lip

With marking spot of durable, fused-on white enamel.

Cat. No.	Dia./L mm	Cap mL	Price Per Dozen	Unbroken Shelf Pack	Price Per Dozen	Unbroken Case	Price Per Dozen
SB08206M	10 x 75	4	\$8.90	6 Dozen	\$8.80	60 Dozen	\$8.70
SB08207M	12 x 75	6	\$9.40	6 Dozen	\$9.12	60 Dozen	\$8.93
SA04533M	13 x 100	10	\$10.80	6 Dozen	\$10.48	60 Dozen	\$10.26
SA04534M	15 x 125	16	\$13.60	6 Dozen	\$13.19	60 Dozen	\$12.92
SA05086M	20 x 150	36	\$19.75	6 Dozen	\$19.16	48 Dozen	\$18.76
SA04537M	25 x 150	55	\$30.25	6 Dozen	\$29.34	24 Dozen	\$28.74
SB33965M	25 x 200	75	\$41.85	2 Dozen	\$40.59	16 Dozen	\$39.76

Culture Test Tubes, Lined, Unattached

Made of borosilicate glass.

Cat. No.	Dia./L mm	Cap mL	Price Per Dozen	Unbroken Shelf Pack	Price Per Dozen	Unbroken Case	Price Per Dozen
SB10851M	10 x 75	4	\$5.45	6 Dozen	\$5.29	60 Dozen	\$5.18
SA08669M	13 x 100	10	\$7.00	6 Dozen	\$6.79	60 Dozen	\$6.65
SA08670M	16 x 150	24	\$9.60	6 Dozen	\$9.31	48 Dozen	\$9.12
SB33909M	18 x 150	28	\$11.50	6 Dozen	\$11.16	60 Dozen	\$10.93
SA08671M	19 x 150	30	\$12.55	6 Dozen	\$12.17	48 Dozen	\$11.92



CORNING

CORNING® PYREX® Vista™ Test Tubes

These test tubes are well annealed, resistant to heat, and are chemically stable. They feature a blue marking spot and fire-polished beaded rims. Cylindrical shape. Round bottom.

Cat. No.	Dia./L mm	Cap mL	Price Per Ten
SB46682M	13 x 100	9	\$7.35
SB46685M	15 x 125	14	\$9.45
SB46688M	18 x 150	27	\$11.00
SB46691M	20 x 150	34	\$13.25



Rubber Stoppers

Developed for demanding laboratory work. Soft, pliable, resilient, low in free sulfur, resistant to chemical attack. Made of black rubber. Size numbers are molded into the top. All stoppers are 25 mm long, and sizes number 2 and above accept 5-mm tubing. Smaller sizes accept 4 mm tubing.



Rubber Stopper Assortment

The most cost-effective way to purchase rubber stoppers. Each package has a selection of solid, one-hole or two-hole stoppers.

Size 1-6 1/2. Per 1-lb. pkg.
SB16726M **\$14.75 per pkg.**

Rubber Stopper Assortments

Each contains a variety of stoppers in sizes 00 through 8.



Weight	Cat. No. Solid	Cat. No. One-Hole
1 lb.	SB08224M	SB08226M
3 lbs.	SB08225M	SB08227M

Per lb. **\$13.95**

Recommended Stopper Sizes for Test Tubes

Rubber Stopper Size	Test Tube Diameter in mm
00	13-15
0	16
1	18
2	19-20
4	25

Size	Top Dia. mm	Bottom Dia. mm	Approx. No./lb	Cat. No. Solid	Approx. No./lb	Cat. No. One-Hole	Approx. No./lb	Cat. No. Two-Hole
00	15	10	90	SB08489M	99	SB08504M	---	---
0	17	13	63	SB08490M	72	SB08505M	78	SB08515M
1	19	14	52	SB08491M	57	SB08506M	66	SB08516M
2	20	16	45	SB08492M	50	SB08507M	54	SB08517M
3	24	18	33	SB08493M	35	SB08508M	37	SB08518M
4	26	20	28	SB08494M	29	SB08509M	30	SB08519M
5	27	23	24	SB08495M	25	SB08510M	25	SB08520M
5-1/2	28	24	22	SB10885M	23	SB10887M	24	SB10889M
6	32	26	18	SB08496M	18	SB08511M	18	SB08521M
6-1/2	34	27	16	SB10886M	17	SB10888M	17	SB10890M
7	37	30	13	SB08497M	13	SB08512M	14	SB08522M
8	41	33	10	SB08498M	11	SB08513M	11	SB08523M

Visit online for more accurate prices.
\$9.25 per pack

Cork Assortment

Convenient assortment for laboratory use. Packaged 100 corks to bag with nearly equal amounts of each size 2-8.

SB10877M **\$19.90**

Cork Stoppers

Made of good quality cork of regular length. Packed 100 per bag.



Bottom of cork or stopper diameter must be smaller than test tube diameter

Cat. No.	Size No.	Top Dia. mm	Bottom Dia. mm	Length mm	Price Per 100
SB01519M	2	12	9	17	\$19.90
SB01520M	3	14	11	19	\$19.90
SB10873M	4	15	12	20	\$19.90
SB01521M	5	17	13	22	\$19.90
SB10874M	6	19	15	24	\$19.90
SB10875M	7	20	16	25	\$19.90
SB10876M	8	22	17	27	\$19.90

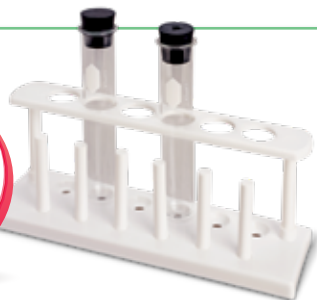




Test Tube Rack

A polypropylene, autoclavable in-line test tube rack with six holes 25 mm in dia. in the top plate with corresponding hemispherical wells in the base. The top plate of this high-visibility rack is supported by two columns, leaving the front open for clear viewing. Six vertical pins for tube drying are also aligned at the rear edge of the base. The 9-1/2" x 3" x 3-5/8" (241 x 76 x 92 mm) rack is supplied ready for snap-in assembly.

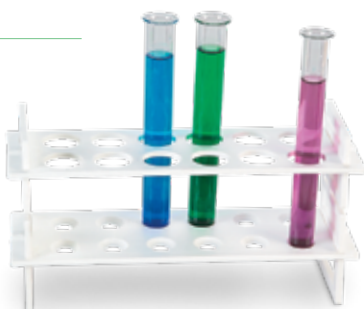
07620 \$10.55



Plastic Test Tube Rack

Sturdy, high-impact plastic rack will hold 12 test tubes up to 20 mm in diameter. Easy to assemble and chemical resistant. Dimensions: 9" x 2 3/4" x 5".

SB33666M \$7.25



Hardwood Drying Rack

For storing, drying, or dispensing test tubes and 25 mL graduates. 50 hardwood pegs secured to hardwood base 33 x 20 x 2.5 cm.

SB08484M \$46.15



Safe Test Tubes

Large, clear plastic test tubes are basically indestructible no matter what the age of your scientist. Threaded cap prevents spills. Will withstand freezing temperatures or temperatures up to 200° F (will not withstand heat from a flame). Can be washed over and over. Set of 15 tubes and caps with activity guide. Capacity: approximately 50 ml (1.75 oz.). 6 in. L x 7/8 in. dia.

SB33231M \$32.45



Super Tube™ Rack. Sturdy plastic test tube holder will hold up to five Unbreakable Super Tubes™.

SB45376M \$17.75



Wet/Dry Test Tube Racks

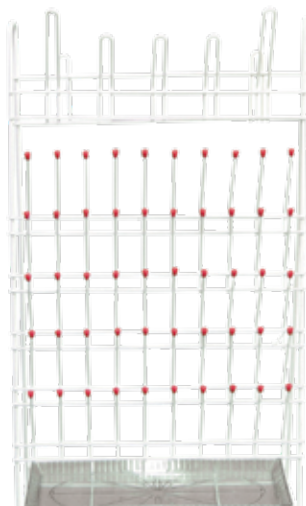
These racks will not rust or stain, and have been designed so that the flow over the length is uninterrupted except by the test tubes containing samples. A high specific gravity plastic provides excellent stability with no tendency to float or move in circulating water baths. An alphanumeric grid reference on the top tier enables precise location in the rack of particular samples. Shipped flat, easily and permanently snapped together to reduce shelf space needed in storerooms.

Cat. No.	For Tubes mm	Places	Price Each
SB26116M	16	60	\$12.00
SB26117M	20	40	\$12.00
SB46836M	25	24	\$10.65

Drying/Draining Rack

This self-standing rack can be used to dry and store test tubes, beakers, flasks, and more. Can also be mounted to a wall. Includes a removable heavy acrylic drain pan measuring 13" x 5-1/2" x 3/4". Rack can hold up to 55 pieces on 50, 4" L pins; two, 4-3/8" L pins; and three, 3" L pins. Pins are rubber tipped for cushioning. Rack measures 14" W x 26" H x 5-1/2" D.

SB45747M \$92.35



Draining and Drying Rack

Use this rack for draining, drying, and storing virtually all laboratory glassware. Can be used standing up, lying down, or mounted on a wall. Galvanized metal drain pan keeps liquid off countertop. Vinyl-coated, heavy-gauge steel wire cushions glassware to avoid breaks, chips, and rusting. Capacity: 90 pieces of glassware on 72 three-inch pins and 18 five-inch pins. Dimensions: 18-1/2" W x 7-1/8" D x 19" H.

SB23813M \$182.35



Polypropylene Drying Racks

Mount the racks on the wall or set them on a table. The detachable 5" pegs are arranged in rows that are staggered from the upper row. Features a built-in molded draining tray with a hole in the tray for drainage and 30" of vinyl tubing. Includes wall mounting bracket.

27 Pegs. Six rows of pegs.

15 3/4" W x 21 3/4" H.

SB48977M \$149.95



LAB SUPPLIES

FLASKS



FLASKS

1. KIMAX Flasks, Erlenmeyer, Narrow Mouth

Reinforced beaded top and capacity scale. Borosilicate glass.

Cat. No.	Capacity mL	Rubber Stopper Fit	Each	Unbroken Shelf Pack	Each	Unbroken Case	Each
77530	50	1	\$7.40	12	\$7.32	48	\$7.17
77532	125	5	\$6.90	12	\$6.79	48	\$6.65
77534	250	6	\$7.05	12	\$6.94	48	\$6.79
77536	500	7	\$12.40	6	\$12.00	36	\$11.50
77538	1000	9	\$16.50	6	\$14.36	24	\$14.06
77540	2000	10	\$33.15	4	\$32.74	8	\$32.06

2. Economy Flask, Erlenmeyer, Narrow Mouth

Narrow-mouth flask. Borosilicate glass. Toolled top finish, capacity scale, thick walls, long tapered outside contour. Strain point 520° C.

Save! Buy the Set Set of 5. Includes one each of 50 mL, 125 mL, 250 mL, 500 mL, and 1000 mL flasks listed below. **SB44510M \$41.80**

Cat. No.	Capacity mL	Rubber Stopper Fit	Each	Unbroken Shelf Pack	Each	Unbroken Case	Each
77550	50	1	\$2.50	12	\$2.30	48	\$2.00
77552	100	3	\$3.10	12	\$3.78	48	\$3.71
77542	125	5	\$5.60	12	\$4.75	96	\$4.66
77554	250	6	\$4.95	12	\$5.72	48	\$5.61
77556	500	7	\$9.60	6	\$8.92	36	\$8.74
77548	1000	9	\$27.30	6	\$16.88	24	\$16.53

3. Narrow-Mouth Pyrex® Erlenmeyer Flasks

These narrow-mouth, student grade, PYREX® Erlenmeyer flasks are very economical. Uniform wall thickness provides proper balance between mechanical strength and thermal shock resistance. Approximate graduations are in durable enamel. All sizes have a large triangular marking spot.

Save! Buy the Set Pyrex® Erlenmeyer Flask Set. Includes one each of five sizes: 50 mL, 125 mL, 250 mL, 500 mL, and 1,000 mL. **SB46694M \$69.70**

Cat. No.	Capacity mL	Each
SB42601M	125	\$6.45
SB42602M	250	\$6.80

4. Valveware Wide-Base Erlenmeyer Flasks

These new wider base Erlenmeyer flasks feature full-scale graduations and a marking spot in durable white enamel. Borosilicate glass. Made in the U.S.A.

Cat. No.	Capacity mL	Each	Unbroken Case	Each
77558	125	\$8.30	10	\$7.90
77560	250	\$9.60	10	\$9.20
77562	500	\$10.30	4	\$10.00

5. KIMAX Flasks, Erlenmeyer, Wide-Mouth

Heavy-duty toolled top finish, with capacity scale. Borosilicate glass.

Cat. No.	Capacity mL	Rubber Stopper Fit	Each	Unbroken Shelf Pack	Each	Unbroken Case	Each
77564	125	6	\$9.00	12	\$8.80	48	\$8.60
77566	250	8	\$10.45	12	\$10.57	48	\$10.36
77568	500	10	\$12.10	6	\$11.93	36	\$11.69
77570	1000	11	\$18.20	6	\$17.99	24	\$17.62
77572	2000	13	\$33.15	4	\$32.74	8	\$32.06

6. Flasks, Filtering

Heavy wall with tubulation and capacity scale.

Cat. No.	Capacity mL	Rubber Stopper Fit	Each	Unbroken Shelf Pack	Each	Unbroken Case	Each
77576	250	6	\$28.60	6	\$24.74	18	\$24.23
77578	500	7	\$29.70	6	\$29.39	18	\$28.79

7. KIMAX Flasks, Florence

Flat bottom, reinforced toolled top.

Cat. No.	Capacity mL	Rubber Stopper Fit	Each	Unbroken Shelf Pack	Each	Unbroken Case	Each
SB08187M	500	6	\$22.15	6	\$21.49	72	\$21.04
SB10840M	1000	8	\$27.55	6	\$26.72	36	\$26.17

8. Volumetric Flask, Plastic Snap Cap - Class A

Same as Glass Stopper Series, but with plastic snap caps.

Cat. No.	Capacity mL	Each	Unbroken Shelf Pack	Each	Unbroken Case	Each
SB16096M	50	\$13.10	6	\$12.71	12	\$12.45
SB16097M	100	\$15.50	6	\$15.04	12	\$14.73
SB16098M	200	\$18.50	6	\$17.95	12	\$17.58
SB16099M	500	\$29.90	6	\$29.00	12	\$28.41
SB16100M	1000	\$44.40	6	\$43.07	--	--





Plastic Labware Value Set

Economical starter kit includes an assortment of popular plastic labware items. All items except wash bottles are autoclavable. Includes 26 labware items in addition to 12 plastic tubes.

Contains the following:

- Beaker, 50 ml
- Beaker, 100 ml
- Beaker, 250 ml
- Beaker, 500 ml
- Beaker, 1,000 ml
- 3 Erlenmeyer flasks, wide mouth with cap, 250 ml
- Graduated cylinder, 10 ml
- Graduated cylinder, 25 ml
- Graduated cylinder, 50 ml
- Graduated cylinder, 100 ml
- Graduated cylinder, 250 ml
- Graduated cylinder, 500 ml
- Graduated cylinder, 1,000 ml
- 6 storage bottles, square, wide mouth, 500 ml
- Test tube rack with 12 tubes
- 4 wash bottles, unitary, 500 ml

SB52575M \$108.95



Chemistry Labware Kit

Convenient assortment of items most commonly used in a general chemistry lab.

Contains the following:

- 2 Barnes dropping bottles, 30 mL
- 6 plastic dropping pipettes
- 50 mL glass beaker
- 100 mL glass beaker
- 250 mL glass beaker
- 2-3/4" dia. porcelain evaporating dish
- 6 glass stirring rods, 8"
- 125 mL glass Erlenmeyer flask
- 250 mL glass Erlenmeyer flask
- 6 glass test tubes, 11/16" x 5-7/8"
- 10 mL polypropylene cylinder
- 50 mL polypropylene cylinder
- 100 mL polypropylene cylinder
- 5" L stainless steel forceps
- 9" L steel crucible tongs
- 3-9/16" dia. long stem glass funnel
- 2-15/16" dia. plastic funnel
- Brass test tube clamp with finger grips
- 5" x 5" wire gauze with ceramic center
- 25 mL porcelain crucible with lid
- 2-15/16" dia. watch glass
- Plastic scoop
- Stainless steel spatula with 3" L blade and wooden handle
- 3 solid rubber stoppers
- 3 one-hole rubber stoppers
- 3 two-hole rubber stoppers

SB49823M \$110.55



Student Glassware Assortment

Selection for one lab station in a general science, physical science, or general chemistry laboratory. Designed for 2-4 students. Contains the following:

- Two 100 mL Beakers
- 250 mL Beaker
- 400 mL Beaker
- 2 Bottles, 4 oz., w/ Screw Caps
- Two 50 mL Burettes without stopcocks
- Crucible, #0
- Crucible Cover
- Dropper, Pipette
- 6 Dropping Bottles, 15 ml
- Evaporating Dish, 75 mm
- 250 mL Flask, Erlenmeyer
- 75 mm Funnel, Short Stem
- 20 cm Glass Stirring Rod
- 75 mm Watch Glass
- Mortar and Pestle
- 2 Petri Dishes, 100 mm
- Test Tubes:
 - Six 13 x 100 mm
 - Six 18 x 150 mm
 - Six 25 x 200 mm
- Graduated Cylinders:
 - 10 mL Single Scale
 - 25 mL Single Scale
 - 50 mL Double Scale
 - 100 mL Double Scale
- Glass Tubing:
 - Capillary 1 mm I.D. x 30 cm
 - 6 mm x 30 cm
 - 10 mm x 30 cm
 - 12 mm x 30 cm

SB18006M \$366.95



Wide-Mouth Specimen Jars

These clear flint glass jars are ideal for specimen storage, collecting, and display. They have straight sides and threaded necks. Supplied complete with plastic caps.

Cat. No.	Capacity ounces	Qty./Pkg.	Price Per Pkg.
SB10986M	2 oz.	24	\$49.35
SB10988M	4 oz.	24	\$52.65
SB10990M	8 oz.	24	\$70.65



LAB SUPPLIES

GENERAL



Stirring Rods Scienceware®

Solid, molded polypropylene stirring rods with rounded ends, 8" (203mm) long, 3/16" (4.7mm) dia. Steam autoclavable at 250° F (121° C). Pkg. of 6.
SB14853M \$22.85



SB15199M

Stirring Rods - Glass

Well-annealed with both ends fire polished. Supplied in packages of 12.

Cat. No.	Diameter	Length	Price Per Pkg.
SB15199M	1/4" (5 mm)	8" (20.3 cm)	\$6.35
SB15200M	1/4" (5 mm)	10" (25.4 cm)	\$7.05



Stir Rods - Glass

Pack of 12. 200 x 5 mm.
48772 \$8.95

Vials, Screw Cap

Kimble short-style with black plastic screw caps.

Cat. No.	Qty.	O.D./Length	Capacity	Price
SB15255M	72	12/35 mm	1/2 dr	\$51.05
SB15256M	72	15/45 mm	1 dr	\$51.95
SB15257M	72	17/60 mm	2 dr	\$57.25
SB15259M	48	25/95 mm	8 dr	\$65.05



Coloured Plastic Rack with Tubes

This economical set of 15 ml plastic tubes comes with a brightly coloured, two-tiered test tube stand for convenient storage. Tubes feature screw tops and graduated markings. Package of 12 tubes.

SB44477M \$14.55



Micro Centrifuge

High-speed benchtop Micro Centrifuge offers efficiency, reliability, and quiet operation. The perfect addition for laboratories requiring an economical, compact, and versatile unit for centrifugation. Features a maximum speed of 15,000 rpm and maximum RCF of 15,860 G with 1.5 mL rotors. Durable construction of the MC-150 makes it ideal for continual use and cold-room work.

SB42321M \$434.55

Spinplus 8 Rotor Centrifuge

Gentle braking at low speeds with efficient separation and braking time (20-80 seconds) that can be adjusted for the 0-5,000 rpm speed. LCD display can change between rpm and RCF setting. Separate short spin button allows for quick spins. Operation can be timed anywhere from 10 seconds to 99 minutes. Bell signal indicates operation has finished. Lid automatically opens when operation has ended. Safety lid-lock prevents centrifuge lid from opening until rotor has stopped spinning.

SB52593M \$653.45



Foam-Racked Centrifuge Tubes

These 15 mL tubes have a screw top with easy-to-read black graduations. Packed in a foam rack, these clear, polypropylene, conical bottom bottle tubes offer a writing area to allow for easy sample identification. Working temperature range between 0° and 45° C. Pack of 50 tubes

SB43474M \$48.85



Conical Bottom Centrifuge Tubes

These sterile, conical bottom tubes feature screw top lids, easy to read black graduations, and writing area to allow for easy sample identification. For suggested use in temperatures between 0° and 40° C. Package of 50.

SB45966M 50 mL \$18.45





Glass Separatory Funnel

Conical separatory funnel is made of heat resistant borosilicate glass with a ground glass stopcock and ground glass stopper. Hand calibrated and +/- 1% total volume.

SB45476M 250 mL \$38.15



Funnels, 58° Angle, Short Stem, Glass

Cat. No.	Approx. I.D. Top of Funnel	Fits Filter Paper Dia.	Price Each	Unbroken Shelf Pack	Price Each
SB10849M	35 mm	5.5 cm	\$17.65	6	\$14.89
SA04406M	55 mm	9.0 cm	\$25.55	12	\$20.50
SA04408M	65 mm	11.0 cm	\$27.15	12	\$22.30
SB16116M	75 mm	12.5 cm	\$28.30	12	\$23.70

NASCO Economy Plastic Funnel

Clear plastic funnel with handy 3-3/8" square top. Short stem with 1/2" opening.

SB28256M \$2.55



Multi-purpose Funnel

Funnels for every use. Handy hang-up tab on rim.

07370 227ml \$3.10

76608 398ml \$3.88

76610 795ml \$4.85



Filtering Kit

Excellent kit for filtering. Consists of one each of filtering flask, 500 ml; porcelain Buchner funnel, 90 mm; vacuum pump hand with gauge; filter paper, 90 mm, pack of 100; and rubber stopper with hole to accept Buchner funnel. Packed in a convenient storage box.

SB42284M \$91.45



1. Geissler Burettes, Straight Glass Stopcock

An economical burette for use in laboratories and educational institutions. Accurately calibrated. The stopcock for all sizes has a 2-mm approximate diameter of the hole through the plug. 1/10-mL subdivisions.

Cat. No.	Capacity	Price Each
SA08635M	50 mL	\$55.25

2. Burettes

Borosilicate glass burettes offer accuracy, reliability, and durability even after repeated usage. Each burette is individually calibrated for precision and high accuracy. All graduations are durable in white enamel. Features general purpose screwthread stopcocks with PTFE keys providing excellent flow control and unique Fluon/glass seals that prevent leakage.

Cat. No.	Capacity	Grad. Interval mL	Price Each
SB39109M	50 mL	0.10	\$22.75

3. Plastic Burettes

This burette has a transparent acrylic body and a leakproof stopcock fitted with a self-lubricating PTFE plug. Each burette is individually calibrated to give maximum accuracy. Acrylic body is unaffected by dilute mineral acids and bases except hydrofluoric acid and ammonium hydroxide. The pH range of 1-14 is ideal and can be used up to 5% wt/wt of acids or 30% bases. Available in two sizes.

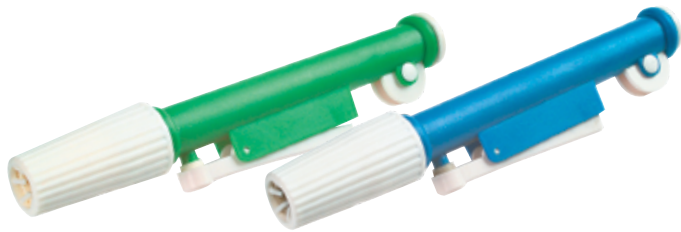
SB37388M 25 mL \$20.35

SB37389M 50 mL \$27.15



LAB SUPPLIES

GENERAL



Scienceware® Fast Release Pipette Pump™ 11

Accurate and precise pipetting made easy. Safe even with corrosive or toxic liquids. Easily operated with one hand. Pipettes fit easily; rotate knurled wheel forward or backward for precise filling or emptying. Rapid emptying by depressing plunger.

Blue: Pipettes up to 2 mL
SB37721M \$33.15

Green: Pipettes up to 10 mL
SB37722M \$33.15

Red: Pipettes up to 25 mL
SB48904M \$55.75

Well Plate

This clear polystyrene plate features 24 wells, each 5/8" deep, and comes with a lid. Each well has an alpha-numeric marking. Measures 5" L x 3 1/4" W x 7/8" H. Plates are individually wrapped in a plastic bag and are non-sterile.

SB47053M \$6.55



Dynalon Plastic Pipettes Sterile

Gamma irradiated to ensure sterility and certified non-pyrogenic with an endotoxin level of below 0.25EU/mL. Batch specific certificate supplied in each carton. Lot number for complete traceability. Accuracy of +/- 1% for nominal volume. Clear black printed graduations for maximum clarity. Descending and ascending graduations to aid pipetting. Negative graduations for extra capacity. Colour-coded for easy identification. Individually wrapped.

1 mL, Pack of 100.
SB44696M \$49.75

2 mL, Pack of 100.
SB44697M \$50.25

5 mL, Pack of 50.
SB46032M \$45.35

10 mL, Pack of 50.
SB44699M \$41.45

3-Valve Multicoloured Safety Pipette Filler

Standard three-valve ball fits up to 50 ml pipettes. Made of 100% natural rubber with 1/4 in. dia. opening. Colours may vary. Standard pipette fillers eliminate the need for mouth pipetting.

SB51199M \$21.95



Glass Pipettes

Made from heavy-wall borosilicate accurate bore glass tubing. Precision formed jets and bevel ground ends resist chipping. Graduation marks are resistant to normal laboratory agents and repeated washing. Pipettes can be autoclaved. 0.1 ml graduations.

5.0 mL Pipette.
SB39134M \$5.15

10.0 mL Pipette
SB39135M \$5.15



SB50474M

SB50475M

SB50476M

Transfer Pipettes

Manufactured from nontoxic, low-density polyethylene, LDPE. Ideal for transferring and dispensing liquids safely in all types of laboratories, eliminating the risk of gross contamination. Offers excellent transparency with uniform wall thickness and precise graduations, ensuring consistent results. Non-sterile.

3 mL. Stem graduations: 0.25 mL. Length: 138 mm.

SB50474M Pkg. of 100. \$9.15

SB50477M Pkg. of 500. \$41.15

5 mL. Stem graduations: 0.25 mL. Length: 160 mm.

SB50475M Pkg. of 100. \$9.65

SB50478M Pkg. of 500. \$49.00

7 mL. Stem graduations: 0.50 mL. Length: 160 mm.

SB50476M Pkg. of 100. \$9.85

SB50479M Pkg. of 500. \$52.00



Pipettes

Translucent, graduated, unsterilized.

75782 2ml \$0.55

75784 10ml \$1.05

Medicine Droppers

Glass, Pack of 12. Straight, 2 mL droppers with bulb.

07760 \$10.50



Medicine Droppers

Plastic, Pack of 12.

48802 \$8.50



2-Valve Natural Rubber Pipette Filler

Only has two operating points for fluid intake and draining. Easy to clean. Made of natural rubber. Colours may vary - black or red.

SB43861M \$21.75





1. Mortar and Pestle

Heavy-duty design mortar and pestle are sold as a set. Mortars with pouring lip are glazed on the outside, but insides are left with natural rough surface. Pestles are oversized for comfortable gripping and are glazed to the grinding surface.

Cat. No.	Diameter mm	Pestle Length mm	Price Each
48018	90	90 mm	\$9.90

2. Evaporating Dishes

Evaporating dishes with a rounded bottom and pouring lip are glazed inside and out, except for rim, for easy cleaning. Excellent resistance to thermal shock.

Cat. No.	Diameter mm	Height mm	Capacity mm	Price Each
48090	70	30	50	\$3.25
SB17998M	80	34	80	\$4.95
SB17999M	90	40	120	\$6.75



Crucibles

These porcelain crucibles are glazed and can withstand temperatures up to 1,922° F (1,050° C) without cracking, exploding, or deforming. Each unit comes complete with base and cover. Individually packaged in cardboard boxes with separator between lid and base for added protection.

Cat. No.	Form	Capacity	Size	Price
SB47675M	High	10 mL	1-1/8" H x 1-1/4" dia.	\$2.55
SB47674M	High	15 mL	1-1/4" H x 1-3/8" dia.	\$3.05
48468	High	30 mL	1-3/4" H x 1-5/8" dia.	\$4.45
SB47677M	Low	30 mL	1-1/4" H x 2" dia.	\$3.45



Test Tube Brushes

Bristle brush on wire handle.

48040	Small: 8.9 x 1.3 x 22cm	\$6.45 each
48042	Medium: 8.9 x 2.0 x 22cm	\$9.05 each
48133	Large: 10 x 2.5 x 27cm	\$10.15 each

Flask Brush

Large, twisted wire, multi-fan, bristle brush.

48044	11.5 x 3.2 x 26.7cm	\$3.05
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Cylinder and Bottle Brush

A black bristle brush with radial end. Brush: 5" long, 2" dia. Overall length: 13".

SB08102M	\$3.35
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Beaker, Jar, and Cylinder Brush

A black bristle brush with a tufted end on a wooden handle. Brush: 6" long, 3/4" dia. Overall length: 13".

SB08103M	\$8.45
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Parafilm®

All purpose laboratory film is a versatile, moisture-resistant, thermoplastic flexible plastic for a wide variety of applications. A proven fast, economical covering or stopper for test tubes, beakers, vials, petri dishes, flasks, and various instruments with irregular surfaces.

2" x 250 ft.

SB39418M \$78.00 per roll

4" x 125 ft.

SB39419M \$40.15 per roll



LAB SUPPLIES

GENERAL



1. Burner Tripods

A good-quality tripod for supporting small objects over a burner. Legs are detachable for ease of storage. Made of black enameled cast iron.

Cat. No.	Height	O.D.	Price Each
SB14033M	9"	3-1/2"	\$21.55
SB14034M	9"	5"	\$22.85

2. Ring Stand - Rectangular Support

Heavy black enamel cast iron base, with plated rods.

Cat. No.	Height	O.D.	Price Each
48784	4" x 6-3/4"	5/16" x 18"	\$27.45
SA04429M	5" x 8"	3/8" x 20"	\$32.45

Heavy, rectangular, stamped steel base. Chrome-plated steel rod.

Cat. No.	Height	O.D.	Price Each
SB14025M	4" x 6"	5/16" x 19"	\$23.45
48786	5" x 8"	3/8" x 20"	\$32.85

3. Ring Stand - Triangular Support

Triangular cast iron base, heavily enameled, with plated rods.

Cat. No.	Height	O.D.	Price Each
SA04544M	4"	3/8" x 20"	\$22.45
SB14028M	5"	1/2" x 24"	\$30.85
SB37527M	6"	1/2" x 36"	\$40.55

4. Wire Ring Supports

Formed, heavy, aluminum-plated, bright steel wire ring with extension arm and "V" clamps which will fit rods up to 3/8" diameter.

09885 3" support	09887 5" support
\$7.75	\$10.65

5. Triangles

Clay pipe stem, iron wire, improved twisted wire style.

Cat. No.	Side Length	Each
SA04428M	2"	\$3.25

6. Ring Stand Set

Set contains a heavy base and rod, along with two (3", 4") cast iron support rings with clamps. Base is 4" x 6" with 18" L rod. One-year warranty.

SB34800M \$49.75

7. A-Base Support Stand and Rod

The A-shaped base is made of rugged cast iron for extra stability. It has 9"-long legs and features a chemical-resistant, black finish. The rod is zinc-plated steel and measures 24" L x 1/2" dia. Overall dimensions: 24" x 9" x 2".

SB47749M \$34.85



Right-Angle Clamp Holder

A die-cast iron holder with 5/16" steel thumbscrews. For rods up to 3/4" (19 mm) dia. 09840 \$5.00



Thermometer Clamps

Adjustable 360° jaw rotation for attaching up to 3/4" (19 mm) dia. rods. Aluminum muff, with steel thumbscrew, phosphor-bronze jaws. Maximum length from jaw to muff 4-3/8" (111mm). 5-1/2" (140 mm) long.

SB18969M \$12.65



Universal Clamp with Holder

Features vinyl-coated three-pronged jaws that open up to 2-1/4" W. Includes fiberglass sleeves and a clamp holder that can be rotated 360°.

SB47055M \$25.75



Burette Clamp - "V" Jaw

Designed to hold small objects. One jaw is flat and the other is "V" shaped with an opening of 3/16" to 13/8". Fits rods up to 3/4" (19 mm). Plastisol-coated jaws.

15338 \$9.95



Burette Clamp Symmetrical

Round, plastisol-coated jaw with 3/8" to 1-3/8" opening. Length: 6-3/8". Clamp will fit rods up to 3/4" dia.

SB18967M \$12.55





Lab Scoop & Handle

Includes the Laboratory Scoop Handle (SB08212M) and Laboratory Scoop (SB08211M) listed below.

SB37548M \$4.45

Laboratory Scoop Handle

Lacquered, turned wood handle, 5-1/2" long. Fits all standard laboratory scoops.

SB08212M \$3.65 ea.

Laboratory Scoop

Stainless steel, 6-1/2" long.

SB08211M \$2.85 ea.

Stoddard's Test Tube Clamp

Chrome-plated brass spring wire.

Maintains its spring strength indefinitely.

09140 \$2.20 ea.

091401 Package of 12 \$23.25



Test Tube Clamp

For test tubes (Stoddard) with finger grips. Self-closing jaw. Chrome-plated brass spring wire. Jaw opening up to 1" dia. Length: 5" (127 mm).

SB10759M \$2.55

Crucible Tongs - Standard

9" long. Designed for handling and moving apparatus, especially crucibles, test tubes, vials, etc., that cannot be touched by hand. Serrated gripping surface. Steel, nickel-plated. Resists rust.

SB15254M \$10.15



Lab Tool Kit

A great assortment of the most commonly used lab tools - all available in one convenient set. Kit includes crucible tongs, test tube clamp with finger grips, test tube brush, spatula with one flat and one spoon end, tweezers/forceps, and lab scoop. Tools come in a reclosable poly bag.

SB31101M \$24.65



Beaker Tongs

For beakers 50- to 2000-mL capacity. Flat riveted joint. Maximum jaw opening: 4-1/2". Length: 9". Plated steel with plastisol jaws.

09835 \$7.80 ea.

Deluxe Flask Tongs

Stainless steel. 11-13/16".

SB49821M \$19.65



Steel Forceps

Designed for handling harmful chemicals or hot objects. The forceps are nickel-plated to prevent rust. 5" long. The blunt points are file cut and fit squarely together.

SB12148M \$4.95



Micro Spatula

Stainless steel (10-13% nickel) wire. Approximate overall length 7", wire .156" diameter, flat ends 2" long. Mirror finish.

SB08213M \$2.95



Micro Spatula/Scoop

Stainless steel instrument has a 1-1/4" scoop at one end and a 1-1/2" flat spatula on the other end. Measures 7-1/4" long.

SB46828M \$9.15



Microspoon/Spatula

Nickel/stainless steel, mirror finish. Overall length: 23 cm. Flat end length 50 mm. Spoon end length: 27 mm x 13 mm wide.

SB21567M \$4.95

Deflagration Spoon

This deflagrating and combustion spoon is designed for burning phosphorus, sulfur, etc. Stainless steel spoon has a 15" handle and the diameter is 3/4".

SB12185M \$8.25



LAB SUPPLIES

GENERAL



Watch Glasses

Made of high-quality flint glass that withstands heat. Well annealed with fine polished edges. Thickness: 1.8-2.0 mm.

Cat. No.	Thickness	Price Per Dozen
SB16466M	65 mm	\$10.05
731250	75 mm	\$13.25
SB50574M	100 mm	\$18.95
SB50573M	125 mm	\$24.85

PYREX® Watch Glasses

High chemical durability prevents contamination of solutions. Heavy wall and uniform fire-polished edge provide mechanical strength. Molded to the same radius of curvature for convenient stacking.



Cat. No.	Dia. Size	Qty.	Each
SB51163M	75 mm	1	\$6.55
SB51164M	75 mm	12	\$62.35
SB51165M	100 mm	1	\$8.25
SB51166M	100 mm	12	\$76.35

Petri Dish Holder

Used to sterilize, refrigerate, or incubate culture dishes. Design allows for easy carrying or stacking of dishes. Soft black vinyl coating. Capacity: 18 dishes, 100 x 10 mm; 12 dishes, 100 x 15 mm. Dimensions: 9-1/16" x 4-3/8" x 7-1/8" high.

SB28540M \$55.25



Cotton Tips

Nonsterile, 6" wood stick. Bag of 100.

SB08678M \$2.75 per bag



Divided Petri Dishes

These polystyrene petri dishes are disposable, stackable, and sterile.

100 mm Diameter Divided. 15 mm D. Dishes are divided into two sections. Package of 20.

SB45991M \$7.05



Economical Petri Dishes, Plastic

Pkg. of 25. Clear plastic lid and base. Use for growing cultures and other experiments.

07795 \$11.50



Petri Dishes with Covers

Glass petri dishes. Pkg. of 10.

Cat. No.	Dia. Size	Price
SB51218M	60 mm	\$29.95
SB51220M	90 mm	\$44.85
SB51221M	100 mm	\$59.85

KIMAX Petri Dishes, Culture

A culture dish with reinforced, beaded edges to increase resistance to mechanical breakage and to help in centering bottom inside cover. Dishes remain clear after many uses and will withstand repeated sterilization, wet or dry. The covers have fused-on bright red enamel "COVER", and the bottoms have white enamel "BOTTOM". The combinations of colours and different wordings allow for rapid identification of parts. The bottom also has a vertical arrow on the side to locate exactly the starting point for serial dilutions.



Cat. No.	Approx. Dia. mm	Approx. Height mm	Each
SA08647M	60	15	\$14.25
SB08219M	100	15	\$14.25

Gauze Iron Wire

A useful tool for thermal protection. The wire gauze is made from woven iron with turned edges to prevent fraying. Ceramic center. Approximate measurements.

Cat. No.	Size	Price
09875	5" x 5"	\$2.18 ea
SB17151M	4" x 4"	\$14.85 per 10
SB17152M	5" x 5"	\$20.85 per 10
SB17153M	6" x 6"	\$21.15 per 10



Corning® Hot Plates with Digital Displays

Closed-loop heating and stirring controls monitor and regulate both temperature and stirring speed. Microprocessor maintains consistent and repeatable temperature settings from 5° C (if ambient temperature is 0° C or lower) up to 550° C. Digital LED temperature display is adjustable in 5° C increments and blinks until set temperature is reached. Safety features include: bright LED "hot top" icon lights up when top plate is over 60° C, even when heat control is turned off.

SB41623M 5" x 7" \$525.75

SB41622M 10" x 10" \$776.15



Corning® Scholar Hot Plate

Economically priced hot plate has a white enameled steel top that provides heat transfer up to 400°C. Safety features include dual heat shields that dissipate heat keeping the case cool to the touch. 5" x 5". One year warranty.

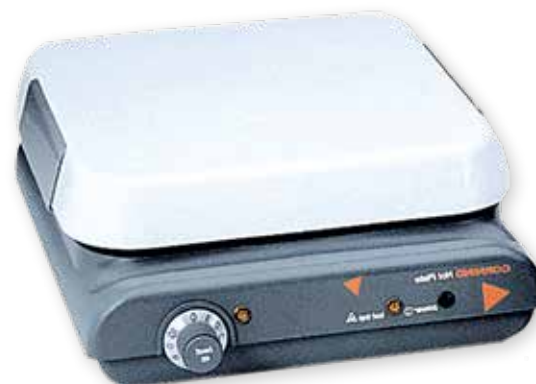
733450 \$284.45



Corning® Stirring Hot Plate with Digital Display

Exclusive closed-loop stirring control monitors and regulates the stirring speed from 60-1150 RPM for aqueous, viscous, or semi-solid solutions. Stronger, larger magnet improves stir bar coupling combined with automatic ramp up speed adjustment minimizes decoupling.

SB42262M 5" x 7" \$822.75



Corning® Hot Plate - Analog

Easy to read numbers simplify measurements, and rugged, extra-large knobs provide greater control for gloved fingers. Safety features include: bright LED "hot top" icon lights up when top plate is over 60°C, even when heat control is turned off. 120V/60 Hz with three-prong plug. UL and cUL approved. Two year warranty.

4" x 5" Hot Plate. With temperature regulation from 25°-550° C (77°-1022° F).

SB28687M \$425.35



Spinbar® Magnetic Stirring Bars Scienceware®

Octagonal stirring bars, Teflon®-coated with pivot ring.

SB07307M Size 1/2" x 5/16" \$7.55

SB07308M Size 1" x 5/16" \$7.95

SB07309M Size 1-1/2" x 5/16" \$8.95

SB07310M Size 2" x 5/16" \$13.35

SB50621M Set of all 4 \$34.45



Magnetic Spinbar® Retriever

A 3/8" (9.5 mm) dia. polyethylene pick-up rod with powerful Alnico magnet sealed in one end and handy hang-up grip on other. 12" (305 mm) long.

SB10190M \$19.35

Single Electric Burner

Compact, die-cast, single flat burner is easy to use and clean. Features high, medium, low, and warm temperature settings with a power-on safety indicator light. 9-12" W x 8-12" D x 3" H.

WA26024M \$32.65



LAB SUPPLIES

GENERAL

NATURAL GAS NO-TIP BUNSEN BURNERS

Expanded base prevents easy tipping, even with hoses connected. Spaced feet allow burner to fit comfortably under stands. Includes carry handle.

1. Basic. Features airflow adjustment sleeve. 5-11/16 in. H (145 mm).

SB52635M \$22.15

2. Standard. It allows air-to-fuel adjustments as well as throttle control. Includes flame stabilizer, and gas adjustment needle valve. 6-5/16 H (160 mm).

SB52637M \$34.85

3. Tirrill. Features attached wing nut for gas adjustment. Tube screws for air-to-fuel adjustment. 5-7/8 H (150 mm).

SB52639M \$47.35

4. Meker. Features grid that separates the flame into much smaller flames. Temperature range: 1,715° F (935° C) to 2,156° F (1,180° C). 8-5/8 H (220 mm).

SB52641M \$86.45



Economy Bunsen Burner

Adjustable burner for use with natural gas. Heavy-duty cast iron base for extra stability. Chrome-plated steel tube with air regulator and threaded needle valve.

SB27553M \$24.65 ea.

Tirrill Burner Natural Gas

Noiseless burner allows separate control of both flame temperature and length. Clean flame from 1/2" to 12" high. Rustproof. One-piece, nickel-plated, die-cast base and serrated gas inlet. Aluminum mixing tube. Threaded aluminum air control sleeve, brass needle valve, flame stabilizer.

SB07242M \$43.15



Micro Bunsen Burner

Miniature burner with fine gas control needle, adjustable gas regulator, and built-in flame retainer. Use with natural gas. 3-1/2 in. H.

SB52553M \$39.55

Spark Lighter - Hooded

Safer to use than matches, because the sparks will ignite combustible vapor only. Supplied complete with replaceable tip. Perfect for any school laboratory.

SB16654M \$5.15 ea.

Replacement Tips. Pkg. of 10.

SB16655M \$9.45 per pkg.



Tubing Clamp Hoffman Screw

A rugged clamp easily installed or removed without disconnecting the ends of tubing. Made from nickel-plated brass.

For Tubing up to 5/8" in Diameter.

SB12146M \$2.35 ea.

For Tubing up to 7/8" in Diameter.

SB12147M \$2.55 ea.



Bunsen Burner Connecting Tubing

Galvanized, flexible steel tubing with a gas-proof rubber insulation covered with cotton braiding to meet the standards of the American Gas Association. The rubber connector ends easily attach to standard 3/8" nipples. Can be used with Tirrill burners and other high-temperature burners.

2-ft. Tubing.

SB10461M \$25.55

3-ft. Tubing.

SB10462M \$31.95



Silicone Rubber Tubing 12 x 12 mm, 8 mm Bore, 10-Meter Coil

Synthetic silicone will last many times longer than natural rubber tubing. Approved for LPG and natural gas. UV-resistant tubing has a square external profile that will sit flat on benches, immediately identifying any kinks that might force a burner to topple. Features 8 mm bore with 6 mm wall thickness for extreme vacuum. Tubing is 12 x 12 mm with a 10-meter coil. Lasts 10 times longer than standard tubing. Flexible silicone profile will resist kinking better than other materials.

SB52139M \$76.85



Rubber Tubing

Amber, pure latex, 1/16" medium wall.

Cat. No.	I.D.	Length	Price
SB13205CM	1/8"	50 ft.	\$58.85
SB13206CM	3/16"	50 ft.	\$60.85
SB13207CM	1/4"	50 ft.	\$65.85



Portable Butane Laboratory Burner

No messy wicks to replace or central gas line needed. Stable, tip-resistant design and easy grip handle provides safe use and portability. The multi-port gas vent provides a fully adjustable halo flame. Solid-state trigger ignition and two-hour fuel capacity. Maximum temperature: 1300° C/2450° F. 3-1/2" H x 5" W. Butane not included.

SB44728M \$88.00

Fuel Refilling Holder

This refilling holder makes it both safe and easy to quickly refill Portable Butane Laboratory Burner (SB44728M), using Butane Fuel Canister (SB38457M).

SB45685M \$10.85

Portable Butane Burner Package

All the elements you need for a complete butane burner set. Includes burner (SB44728M), fuel (SB38457M), and fuel refilling holder (SB45685M).

SB46065M \$102.00

Butane Fuel

Premium fuel prevents clogging and provides a cleaner burn. Features universal filling tube and added odorant to detect leakage. 3.8 oz. **Note: Any quantity may be shipped with a hazardous materials charge.**

SB38457M \$10.25



Portable Gas Bunsen Burner

This self-contained Bunsen burner stands on its own as a benchtop burner, and can also be used as a handheld torch. Contains a completely controlled flame size that can be manually controlled for off/on or set for a continuous flame. Will not flare in any position, and has an OFF/ON switch for safety. Single-knob gas control with trigger-activated electronic auto ignition. One fuel canister provides temperatures over 2,500° F (1,371° C) and up to 1-1/4 hours of continuous burn time. Its compact size and durable all-metal body make it an excellent burner for field use. Use with Butane Fuel (SB38457M). Measures 5-1/2" L x 3-1/2" W x 8" H.

SB47144M \$106.25

Safety Alcohol Burner and Stand Kit

Provides a significant advance in safety over the old-type burner and stand. The burner fits into a recess in the stand so that it is almost impossible to tip it while in use.

SB10930M \$25.25

Replacement Wicks.

Per doz.

SB14308M \$13.75



Alcohol Burners

Flat-bottom alcohol burners have safety caps to prevent alcohol evaporation. 3-1/4" dia. with 1/4" wicks. Split-sleeve wick adjustment. 4 oz.

07780 \$6.75

Replacement Wicks. Per doz.

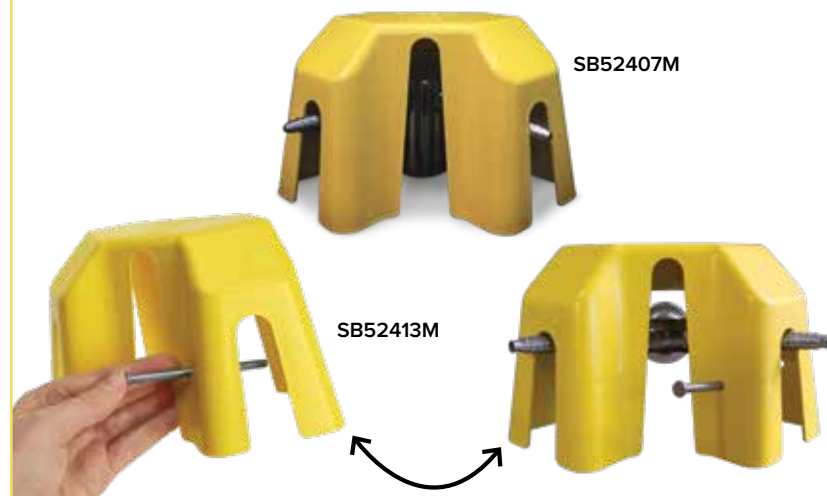
07781 \$5.00



Wood Splints

Approximately 4 mm x 140 mm x 1 mm. Bundle of 500.

SA08889XM \$8.65 per bundle



Burner Brake™

Prevent gas jets from being accidentally turned on and see at a glance if they are off. Covers the gas fixture, keeping the gas jets in the "off" position. Simply remove to use the jets, replace when done. Burner Brake™ can't go on the gas jet unless it is off.

For Counter-Mounted Gas Fixture with 2 Gas Jets at 90° Angles

Cat. No.	Qty.	Fastener	Price
SB52407M	1	No	\$68.75
SB52408M	12	No	\$689.85
SB52410M	12	Yes	\$804.95

For Wall-Mounted Gas Fixture with 2 Gas Jets at 90° Angles

Cat. No.	Qty.	Fastener	Price
SB52411M	1	No	\$68.95
SB52413M	1	Yes	\$80.35
SB52412M	12	No	\$804.95
SB52414M	12	Yes	\$919.95

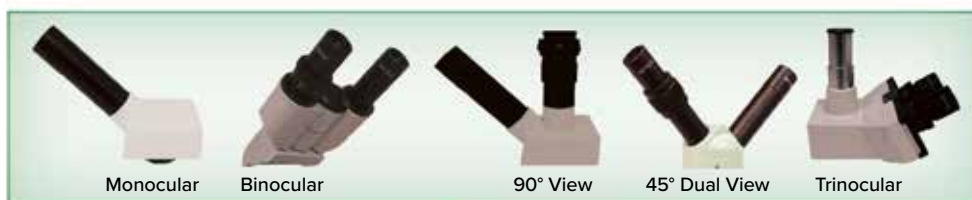


LAB SUPPLIES

MICROSCOPES

HEAD OPTIONS

OBJECTIVE



90° VIDEO
use with digital eyepiece camera

45° DUAL VIEW
two student viewing or use with digital eyepiece camera

TRINOCULAR
use with digital eyepiece camera

NOSE PIECE



STAGE OPTIONS



FOCUS OPTIONS



CONDENSER OPTIONS



DIAPHRAGM OPTIONS



ILLUMINATION OPTIONS





MicroPro™ 48-Piece Microscope Set

With 50X, 100X, 150X, 300X, and 600X magnifications, this microscope is perfect for individual or classroom use. The glass eyepieces and power settings from 50X to 600X provide users with superior precision viewing. The built-in light and rack-and-pinion focusing help deliver bright, clear images. The 48-piece kit has professionally prepared slides and everything users need to make their own specimen slides. Includes: MicroPro™ microscope, two glass eyepieces, scalpel, spatula, stirring rod, tweezers, test tube with cap, petri dish, pipette, spare bulb, three specimen vials, three prepared slides, eight blank slides, eight slide labels, 16 slide covers, and an 18-page instruction and activity guide. Requires two "AA" batteries for light (not included).

SB39462M \$77.55



Lens Paper

A fine, soft, silk-like paper. Does not collect dust or become greasy. Recommended for cleaning microscope slides, optical instruments, and other lenses. 4" x 6" sheets per book.

SB48370M Book of 50 \$1.65

Immersion Oil Cargille

Low viscosity, Type A, PCB-free. Meets microscope manufacturer's exact requirements for refractive index (1.515) and dispersion as specified by ISO. Glass rod in cap for convenient dispensing. 1 oz.

2488M \$20.90

Type B. Thick enough for viewing multiple slides with one application. Saves time during batch processing. 1-oz. container.

2489M \$20.90



Microscope Discovery Kit

This slide making kit is a great way for students to learn about the wonders of microscopy.

Kit Includes:

- 5 plain glass slides
- 1 single concave slide
- 4 prepared slides
- Coverslips
- Slide labels
- Lens paper booklet
- 2 bottles of non-toxic stain (red & blue)
- 1 pair of tweezers
- 1 straight teasing needle
- 1 plastic dropper
- 1 wooden stir stick
- 1 cotton swab
- 1 plastic petri dish
- 1 plastic test tube

2486M \$39.90



Atlantic Metal Microscope Storage Cabinets

Plexi-glass door visual storage cabinet designed for full visibility and security of all your contents. This all-welded and fully-assembled storage cabinet features four shelves that adjust on 2" increments that have a weight capacity of 90.72 kgs. per shelf. Two chrome handles with secure, three-point locking system. 72" H x 36" W x 18" D.

Z20657M \$1,560.00



LAB SUPPLIES

MICROSCOPES

NASCO Elementary Microscope with 360° Rotatable Head

An elementary compound microscope designed for the younger student. This microscope, ideal for the budget minded, has major components of all-metal construction for ruggedness and durability at an economical price. Grades 5-10.

Specifications:

- Wide-field eyepiece, locked-on, mounted at 45° inclined head with pointer, rotates 360°
- Objectives are achromatic, parfocal, parcentered 4X, 10X, 40XR (retractable)
- Triple nosepiece with positive click stops
- Low-position coarse focusing with built-in slip clutch
- Focusing achieved by vertical stage movement while body and head remain fixed
- Stage stop to prevent slide damage
- Choice of LED illumination or mirror
- Standard MS5 moveable stage
- 11¼" high with 5¾" x 4" base
- 360° rotatable head for convenient student or teacher viewing
- Dustcover
- Limited lifetime warranty



SB27572M

Cat. No.	Head	Objectives	Illumination	Focusing	Each
SB27571M	10X wide field	4X, 10X, 40XR	Mirror	Coarse	\$173.95
SB27572M	10X wide field	4X, 10X, 40XR	LED corded	Coarse	\$224.85



All Purpose Microscope

This all purpose microscope is designed with the elementary student in mind. The ease of focusing makes the microscope very attractive to the younger student. Features include: upright image - dissecting microscope; Monocular, 45° inclined, 360° rotatable head; Rack and pinion focusing, with built-in slip clutch system; Locked on 10x wide field eyepiece; 2x objective - total 20x magnification; Large 14 x 11cm stage with slide clips; 24cm high. Easy for young students to adjust specimen on open stage. Comes complete with dust cover and user manual in styrofoam package. Eyepiece 10 x WF, Objectives 2x, Magnification 20x.

77880 \$177.00



2053 Economy Inclined Elementary Microscope

Durable instrument design with students in mind. Cast metal construction built to be strong. A monocular microscope that meets the standard teaching requirements for both elementary and junior high school students. Economically priced for the budget-conscious user. Suitable for grades 4 to 8. Three choices of illumination: mirror, tungsten or cordless LED rechargeable. Limited 5 year warranty.

Features:

- Monocular 45° inclined head with 360° rotation
- Locked-on 10x wide-field eyepiece with pointer
- Revolving nosepiece with positive click stops
- Colour-coded DIN 4x, 10x, 40xR objectives
- 3.5" round movable stage with spring loaded stage clips
- Rack and pinion focusing with slip clutch and adjustable rack stop to prevent slide damage
- 0.65 N.A. condenser
- Tension adjustable coarse focus or separate coarse and fine focusing
- Rugged cast metal construction with inclination joint for adjustable viewing
- Complete with dust cover and instructional manual



77916

Product #	Objectives	Focus	Illumination	Price
77906	4x,10x,40xR	Coarse	Mirror (plano concave)	\$231.25
77908	4x,10x,40xR	Coarse	115v, 15W Tungsten	\$242.45
77914	4x,10x,40xR	Coarse & Fine	115v, 15W Tungsten	\$278.25
77916	4x,10x,40xR	Coarse & Fine	LED Cordless	\$331.95

**Cordless battery life is 10,000 hrs.
8 hrs to charge & 50+ hrs per charge.**



2052 Beginner Monocular Elementary Microscope

Perfect for the beginner elementary student. This microscope tilts at a 45° angle for comfortable viewing and has a slip clutch to protect the focusing mechanism. The substage mirror is sufficient for viewing most slides under normal sunlight.

Limited 5 year warranty.

Features:

- Monocular vertical head with 360° rotation
- Locked-on 10x wide-field eyepiece with pointer
- Revolving nosepiece with positive click stops
- Colour-coded DIN 4x, 10x, 40xR objectives
- 3.5" round movable stage with spring loaded stage clips
- Rack and pinion focusing with slip clutch and adjustable rack stop to prevent slide damage
- 0.65 N.A. condenser
- Tension adjustable coarse focus or separate coarse and fine focusing
- Rugged cast metal construction with inclination joint for adjustable viewing
- Complete with dust cover and instruction manual



Product #	Objectives	Focus	Illumination	Price
22085L	4x,10x,40xR	Coarse	115v, 20W Tungsten	\$232.20
77904	4x,10x,40xR	Coarse	LED Cordless	\$276.15
49038	4x,10x,40xR	Coarse & Fine	115v, 20W Tungsten	\$248.80
77898	4x,10x,40xR	Coarse & Fine	LED Cordless	\$296.25

Replacement Bulb (Tungsten)
Works with 22085L, 49038, 77908, 77914
77842 \$5.40

Replacement Bulb (LED)
Works with 77904, 77898, 77916
733370 \$4.50



Middle School/Senior Microscopes

A precision-built, tamper-proof microscope incorporating high resolution flat field objectives with wide-angle viewing. This quality, full-sized oil immersion microscope is offered at a great price. The model features a low position graduated mechanical stage allowing students more working room on the stage and more suitable positioning for specimens. **Limited lifetime warranty.**

Features:

- Rotates 360° inclined at 45°
- The 45° angle on the dual viewing head is ideal for two person use
- Tension adjustment eliminates stage drift
- DIN objectives are colour coded, parfocaled and par centered
- Plain stage is 4.75" x 4.5" with spring-mounted stage clips
- Coaxial coarse and fine focusing knobs
- Positive stops at both ends of travel to prevent damage to delicate specimens or expensive optics
- LED illuminations - cooler and efficient
- Cord holder for convenient storage
- Includes instruction manual and dust cover

*Cordless models are rechargeable

Replacement Bulb (LED)

733374 \$25.75

Product #	Head	Eyepiece	DIN Objectives	Stage	Illumination	Price
77886 78730	Monocular	10xWF	4x, 10x, 40xR	0.65 N.A. condenser, 5 hole disc diaphragm	LED Corded LED Cordless	\$451.25 \$475.86
77892 78732	45° Dual View	10xWF	4x, 10x, 40xR	Built in mechanical stage, 1.25, Abbe condenser, iris diaphragm	LED Corded LED Cordless	\$511.00 \$534.87
77890 78734	Monocular	10xWF	4x, 10x, 40xR	0.65 N.A. condenser, 5 hole disc diaphragm	LED Corded LED Cordless	\$571.80 \$616.46
77894 78736	45° Dual View	10xWF	4x, 10x, 40xR 100xR(oil)	Built in mechanical stage, 1.25, Abbe condenser, iris diaphragm	LED Corded LED Cordless	\$635.72 \$665.02



77886

Compound Elementary Microscope

These introductory compound microscopes are designed for the young biology student. Features an all-metal construction for ruggedness and durability with coarse focusing and a slip-clutch to prevent damage to both the microscope and slides. **Limited 5 year warranty.**

Features:

- 10x wide-field eyepiece with pointer
- Revolving triple nosepiece with positive click stops
- 4x, 10x and 40xR achromatic objectives that are parcentered and parfocaled
- 3.5" movable stage makes it easy for small hands to adjust specimen
- Built-in slip clutch system to prevent damage to the microscope gears
- Choice of coarse or coaxial coarse & fine focusing
- Fixed condenser and 6 hole rotating disc diaphragm
- Choice of concave mirror, LED corded or LED cordless (rechargeable) illumination
- Rechargeable models include 3 rechargeable (NiMH) batteries and a single adapter
- Comes complete with dust cover and instruction manual

Replacement Bulb (LED)

Works with 77924, 77928, 77930, 77932, 78726, 78728
733372 \$4.80



78726

Monocular-Head

Product #	Eyepiece	Objectives	Focus	Illumination	Price
77924	10xWF	4x, 10x, 40xR	Coarse	No illumination mirror	\$205.22
77928	10xWF	4x, 10x, 40xR	Coaxial	LED Corded	\$269.38
77930	10xWF	4x, 10x, 40xR	Coarse	LED Cordless	\$256.62
77932	10xWF	4x, 10x, 40xR	Coaxial	LED Cordless	\$260.30

Dual-Head

Product #	Eyepiece	Objectives	Focus	Illumination	Price
78726	10xWF	4x, 10x, 40xR	Coaxial	LED Corded	\$367.87
78728	10xWF	4x, 10x, 40xR	Coaxial	LED Cordless	\$345.87



2070 Series Microscope

Standing out from the competition, this microscope has top and bottom illumination so it can be used as a stereo or biological microscope. A great introductory microscope with durable all metal construction. **Limited lifetime warranty.**

Features:

- All metal construction
- 45° monocular head with 360° rotation
- 4x, 10x and 40x glass objectives
- Reverse nosepiece
- 3.5" round movable stage makes it easy for small hands to adjust
- Spring loaded stage clips
- Diaphragm 6 colour filter disc from white to green to blue
- 3-way illumination - top or bottom or both
- Operates on 2 "AA" batteries
- Complete with dust cover and instruction manual

733570 \$204.02

Replacement Led Bulbs

735016 Bottom Bulb \$12.50
735017 Top Bulb \$12.50



Elementary Microscope 3050 Series

The 3050 series microscope offers coarse and fine focusing controls and a round stage that makes it easy for small hands to adjust the specimen. It features modern design with a convenient handle on the arm of the microscope for easy and safe transfer from workspace to workspace. **Limited 5 year warranty.**

Features:

- Monocular 45° inclined head, rotatable 360°
- 10x wide-field eyepiece with pointer
- Reverse triple nosepiece with positive click stops-allows more work space on stage
- Achromatic colour-coded 4x, 10x and 40xR objectives
- 3.5" round movable stage with spring loaded stage clips
- Coarse and fine focusing knobs
- Light intensity control
- Choose from LED corded or LED cordless models
- Vinyl dust cover and instruction manual included

3050 Series Cordless
733654 \$321.20

3050 Series Corded
733652 \$306.55



LAB SUPPLIES

MICROSCOPES

Nasco High School Microscope

Even though this microscope was designed with economy in mind, it has all of the quality features found only on microscopes costing considerably more. All models are durable, student proof, and require limited maintenance. All optics are top quality, and each model comes with a limited lifetime warranty.

Specifications:

- All-metal body and mechanism
- Student-proof construction
- Separate coarse and fine adjustment
- Viewing head inclined
- Locked on 10X wide-field eyepiece with calibrated pointer
- Stage drilled and tapped for add-on mechanical stage
- Monocular or dual viewing head rotates 360°
- DIN Objective lenses are achromatic, parfocal, colour-coded with 40XR and 100XR (oil) lens (retractable)
- Stage stop to prevent slide damage
- Slip clutch to prevent mechanism damage
- LED Illumination
- Convenient drift adjustment
- Stage clips are spring-loaded to eliminate bending
- Built-in 0.65 stage condenser, 5-aperture disc diaphragm for 3 objective models
- Substage illuminator with on/off switch
- Vinyl dust cover
- Lifetime limited warranty

Cat. No.	Viewing Head	DIN Objectives	Substage	Illumination	Price, Each
SB25253M	Monocular, 10X wide field with calibrated pointer	4X, 10X, 40XR	0.65 NA condenser 5-hole disc diaphragm	LED Corded	\$399.79
SB48590M	Monocular 10X Wide-Field with Calibrated Pointer	4X, 10X, 40XR	Includes mechanical stage side adjustment	LED Corded	\$519.75
SB25255M	Monocular, 10X wide field with calibrated pointer	4X, 10X, 40XR, 100XR oil	Abbe 1.25 NA condenser with iris diaphragm	LED Corded	\$494.71
SB48589M	Monocular 10X Wide-Field with Calibrated Pointer	4X, 10X, 40XR, 100XR oil	Includes mechanical stage side adjustment	LED Corded	\$625.00
SB29118M	90° Video/Dual, 10X wide field with calibrated pointer	4X, 10X, 40XR	0.65 NA condenser 5-hole disc diaphragm	110V, 5-watt fluorescent	\$456.28



SB25255M

1000 Infinity Digital Microscope

Designed to meet the demands in education and training environments, the 1000 series with infinity optical system will deliver the best performance for a variety of applications.

Features:

- The rectangular shape and cast aluminum stand features minimum vibrations and provides a strong and stable operation
 - Standard 10X wide-field eyepieces optimize viewing field for easy and comfortable operation
 - 30° inclined binocular head that 360° rotatable
 - Interpupillary adjustment from 50 mm to 75 mm
 - Infinity optical system with semi-plan infinity DIN objectives
 - Coaxial coarse and fine focusing
 - Coarse movement stroke of 25 mm with fine focus graduation of 2 µm
 - Quadruple reverse nosepiece gives easy access to the workspace & slide
 - Built-in mechanical stage and large 145 x 146mm rectangular stage with Vernier scales that allows smooth cross travel motion of 76 x 50mm (right hand operation)
 - 1.25 N.A Abbe condenser with position guide markings for their respective objectives
 - LED light system with light intensity control provides cool, bright and even illumination
 - Comes complete with dust cover and instruction manual
 - CSA approved
- Digital Features:**
- OPTPro software included
 - CMOS 5.0 megapixel camera (2952 x 1944)
 - Data Output: USB 2.0 port, 480 mps
 - Frame speed: 6-30 frames/second
 - Compatible with Windows 2000, XP, Vista, Windows 7
 - Includes a limited 5 year warranty on microscope. One year warranty on camera.

2475M \$2862.20



QFN Series Stereo Microscope 20x to 40x Magnification

The QFN series stereo microscopes delivers a three dimensional, upright image with great clarity, brightness and superior resolution. All metal construction makes these microscopes rugged and durable. Limited 5 year warranty.

Features:

- Binocular head inclined at 45°
- Interpupillary adjustment of 55 mm to 75 mm
- 10X wide-field, high-point eyepieces each with a 20 mm field of view
- Diopter adjustment of +/- 5 on left viewing tube
- Standard working distance of 100mm. Working distance can be increased or decreased with auxiliary lens
- Rotating objective turret with your choice of (1X, 2X), (1X, 3X), or (2X, 4X) objectives
- Magnification of 20x to 40x
- Coated optics provide a crisp image and superior resolution
- Includes one 95 mm glass stage plate and one 95 mm reversible black/white stage plate
- Heavy duty rack and pinion focusing with slip clutch and tension adjustment
- Locked-on spring mounted stage clips
- 3-way built-in illumination system allows transmitted, incident, or dual lighting
- Separate light intensity controls for top and bottom illumination
- Comes complete with dust cover and instruction manual

2490M 20x to 40x Magnification \$553.04

2491M 10x to 30x Magnification \$553.04





SB31361M

SB31372M

NASCO High School Microscope

Specifications:

- Rack-and-pinion movable 1.25 ABBE condenser and iris diaphragm for resolution and contrast control
- Only coaxial microscopes have built-in mechanical stage allowing smooth X-Y travel in 1.0 mm graduations
- Spring-loaded stage clamp for exact positioning of the specimen
- Superior quality locked on 10X wide-field eyepiece with calibrated pointer reticle for measurement
- Monocular 45° inclined, double 45° inclined dual view, or binocular 45° inclined head, 360° rotation
- Seidentopf binocular head with diopter adjustment on the left eye tube
- Objectives are DIN achromatic, parcentered, parfocal, colour-coded 4X, 10X, 40XR (retractable), 100XR (retractable) oil
- Positive stops at both ends of travel to prevent damage to delicate specimens or optics
- Tension adjustment eliminates stage drift
- LED illumination
- Coaxial or separate focusing
- Reverse nose piece provides more working room on the stage
- Limited lifetime warranty

Cat. No.	Focusing	Head	Objectives	Price
SB31361M	Separate	Monocular	4X, 10X, 40X (R)	\$471.24
SB31364M	Separate	Monocular	4X, 10X, 40X (R), 100X (R) oil	\$537.65
SB31367M	Coaxial	Monocular	4X, 10X, 40X (R)	\$498.96
SB31370M	Coaxial	Monocular	4X, 10X, 40X (R), 100X (R) oil	\$577.45
SB31372M	Coaxial	Binocular	4X, 10X, 40X (R), 100X (R) oil	\$791.35



2146M



2145M

Walter 50 Series Biological Microscopes

Compact ergonomic microscope ensures stable, solid performance for long-term use. Ideal for high school and junior college studies.

Specifications:

- Metal frame with arm and base made of one-piece construction
- Siedentopf head (50/50 light splitting ratio), 30° inclined and 360° rotatable, interpupillary adjustment of 55-75 mm
- 10X wide-field eyepieces with diopter adjustment on right eyepiece tube and calibrated pointer on one eyepiece
- Revolving reversed quadruple objective nosepiece
- Objectives are DIN achromatic 4X, 10X, 40XR (retractable), 100XR (retractable) oil
- Low position coaxial coarse and fine focus knobs on both sides with positive focus stop and tension adjustment
- Focusing range of 14 mm, fine focus graduation of 0.01 mm
- 125 mm x 125 mm built-in double-layer mechanical stage, smooth X-Y calibrated movement with cross travel range 60 mm x 40 mm
- Focusable sub-stage N.A. 1.25 Abbe condenser with iris diaphragm mounted on rack-and-pinion system
- 1-watt LED illumination with light intensity control
- Includes dust cover and instruction manual
- 5-year limited warranty

Cat. No.	Head	Each
2145M	Binocular	\$720.25
2146M	Trinocular	\$858.95



Binocular Microscope

- Dual LED illumination (both incident and sub-stage illumination)
- 4X, 10X, and 40X DIN objectives
- 10X WF eyepiece
- Separate coarse and fine illumination
- Mechanical stage
- 1.25 NA iris diaphragm
- Rechargeable battery

SB46630M \$382.65



LAB SUPPLIES

MICROSCOPES



Celestron® Handheld Digital Microscope Pro

View the wonders of the microscope world in the palm of your hand. True SMP sensor takes and saves high-res images. The five-element, IR-cut, high-quality glass lens provides sharper images and previews. Includes professional adjustable stand and Celestron® Micro Capture Pro software with note-taking and measuring features.

Specifications:

- 20X-200X powers
- 5 MP sensor size
- 4X-160X magnification
- 10 mm-infinity focuser range
- 1 second-1/1,000 second shutter speed with trigger on USB cord
- Adjustable still image resolution of 5 MP, 3 MP, 1.3 MP, VGA (12 MP with interpolation)
- Video capture resolution: VGA, 30 fps
- USB 2.0 computer interface
- 5 7/8" x 4 3/4" x 2"

SYSTEM REQUIREMENTS: Windows® XP/Vista/7/8, 512 MB RAM; Macintosh® OS X 10.6/10.7; 512 MB RAM.

SB49688M \$242.00



Oil Immersion Microscope with Built-In Digital Camera

A powerful teaching tool for middle through high school instruction. Cordless LED Illumination. PC & MAC OSX compatible.

Specifications:

- WF10X eyepiece
- DIN 4X, 10X, 40XR, and 100XR (oil immersion objectives)
- 1.25 N.A. Abbe condenser with iris diaphragm
- Built-in mechanical stage
- Bulb life 50,000 hours
- LED illumination equal to a 20-watt halogen bulb
- Powered by 3 rechargeable "AA" batteries (recharger with auto cut-off included); each charge operate light for up to 50 hours
- 3.0 mega pixel digital camera
- Operates on both PC and Mac OSX — includes everything needed for quick Plug & Play use
- Includes Motic Images software
- Lifetime limited warranty on microscope; one-year warranty on camera

SB41027M \$891.45



Celestron® LCD Digital Microscope II

A professional biological microscope at an affordable price. Change powers from 40X to 100X to 400X (up to 1600X with digital zoom) with a turn of the three-position rotating lens turret. The large 3 1/2" colour LCD screen display rotates 180° so you can easily share your viewing with others. For an even bigger audience, you can use the TV output to display on a television or projector. It's never been easier to capture stunning images and transfer them to your PC.

Features:

- Full colour 3.5" TFT LCD screen with onboard software
- Fully adjustable mechanical stage
- 3 fully achromatic objective lenses (4X, 10X, and 40X lenses on rotating turret)
- 3-position nose piece with click stop
- Upper and lower, built-in adjustable LED illuminators
- NA 0.65 condenser
- Capture and save still images and video (built-in 5 MP sensor and included 1 GB SD card)
- Use the included AV cable with an external monitor, projector, or TV screen
- Included accessories: dustcover, rugged canvas carry case with shoulder strap, five prepared slides, and a four-plug multi-country AC adapter

Specifications:

- Dimensions: 6 1/2" x 5 1/2" x 13"
- Weight: 3 lbs. 8 oz.
- Stage dimensions: 3 1/2" x 3 1/2"

SB49573M \$440.25



Zoomy 2.0™ Handheld Digital Microscope

This freshly updated, all-in-one handheld digital microscope gives early scientific study a whole new perspective, and is easy for young children to use. Zoomy™ 2.0 magnifies up to 54x and allows students to closely analyze the structure of objects in greater detail than ever before. Use with a computer, projector, or interactive whiteboard. Uploads and connects via USB. Uploads and connects via USB. Features maximum photo resolution of 640 x 480 pixels, VGA CMOS sensor, 4 LED lights, and 2 lens adapters. Compatible with PC and Mac.

730445 Blue \$109.50



Luna™ 2.0 Interactive Projection Camera

Easy-to-use digital projection camera is also web cam and photo/video camera. Great for students' multimedia projects across the curriculum or whole-class demonstrations of manipulatives in action, book pages, science models, and more. Connects via USB port to use with your computer or interactive whiteboard. Features 3.0MP digital images, adjustable gooseneck, auto focus, and 8 LED lights. No batteries required. Compatible with PC or Mac. Measure 20"H.

730047 \$299.95





High-Intensity OvaView Candler

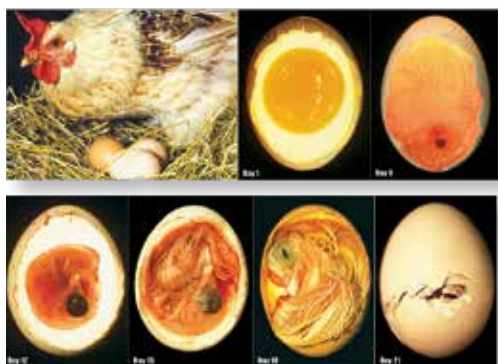
High intensity for darker and mottled eggs (quail, pheasant, etc.). Designed to be either handheld or can be left on a surface. Battery powered for convenience, it uses high-output, high-efficiency, LED illumination — no bulbs to replace and no worry about overheating the eggs during inspection. Supplied with both a normal flexible black ring, plus a special smaller ring for smaller eggs. Requires four rechargeable “AA” batteries (not included). The larger power drain means that rechargeable batteries are needed. Two-year warranty.

C29807M \$82.95

HovaScope Egg Scope

Now you can watch the live embryo develop inside the egg! Great for classroom use, the HovaScope can be fitted with a webcam and is ideal for demonstration purposes. This innovative aid to egg candling improves the clarity and visibility of the egg and its contents by completely blocking out ambient light, slightly magnifying the image of the egg and allowing the viewer to rotate the egg smoothly as it is observed. Uses high-output, high-efficiency, LED illumination — so there are no bulbs to replace and no concerns about overheating the eggs during inspection. Suitable for any size egg up to goose eggs. Supplied with a small black ring to seal against the egg shell of smaller eggs. Requires four “AA” batteries (included). Two-year warranty.

C29805M \$116.15



NASCO Chicken Embryology Poster Set

Show the development of a chicken embryo with this set of three posters that can be joined together. Poster one shows days 0-6, poster two shows days 12-21, and poster three shows day 21. Each section measures 21" W x 714" H.

SB42872M \$26.55

Illuminated Pocket Microscope

Easy-to-focus microscope with 30X magnification. Great for outdoor education. Convenient for classroom investigations. Includes protective case. 6" x 3/4" x 1 3/4" thick. Requires two “AA” batteries (not included).

15663 \$22.05



Pocket Microscope

A 1-3/4" x 5-5/8" long, pocket-size microscope for instant viewing anywhere. This precision illuminated zoom microscope has 60-100X magnification power. Focus can be adjusted by turning the wheel — rotatable bulb can pinpoint the light on the object. Countless uses for collectors, hobbyists, scientists, and students. Requires two “AA” batteries (not included). Includes vinyl storage cover.

SB20198 \$33.75



Dewey The Document Camera Stand

Turns your iPad® 2,3,4, Air and iPad® Mini into a documentary camera by utilizing the iPad®'s camera. This high quality stand provides teachers and students with the opportunity to share work, ideas, and anything else that inspires. Features include adjustable height, unique positioning & rotating feature, foam protection around device, headphone holder, mounting holes on the base, 90° rotating mount that swivels and tilts, keeping the iPad® secure. Frame measures 10.675"W x 15"D x 13.75"-21.25"H. 1-year warranty on frame.

77698 \$89.60



LAB SUPPLIES

MAGNIFIERS & BINOCULARS



Binoculars

These sturdy binoculars feature 6x magnification with 35mm lenses and are made of durable plastic. Colour may vary.

732988 \$24.20



GeoSafari® Jr. Kidnoculars™

The only binoculars designed specifically for little kids! Enlarged focus-free eyepieces—more than three times the size of ordinary binoculars—and perfect-fit goggles with placement guide enable kids (even toddlers) to see up close! Focus-free, 2x magnification, Enlarged eye pieces and foolproof placement goggles, Breakaway neck strap, Built kid-tough and designed to last for years.

730249 \$30.05



GeoSafari® Compass Binoculars

Observe and navigate the great outdoors Junior explorers can see and know where they're heading with these lightweight, high-tech, soft-grip binoculars with built-in compass and attached neck strap. Large 30mm glass lenses and an easy-turn central focus in feature make distant objects 4x larger. Great for camping trips, nature walks, wilderness expeditions...and in-town explorations of all kinds.

730265 \$29.45

10X Pocket Loupe

Quality foldout doublet magnifier with chromed metal holder. Length open 63 mm (2½"), lens aperture 13 mm (½"), focal length 25 mm (1").

SA09134M \$13.25



SB16441M



Round Glass Magnifiers

General-purpose glass magnifiers suitable for routine examination of biological and geological specimens. Chrome rims with black plastic handles. Useful for field and laboratory programs. 2-2.5X.

**2" Diameter
SB16440M \$6.95**

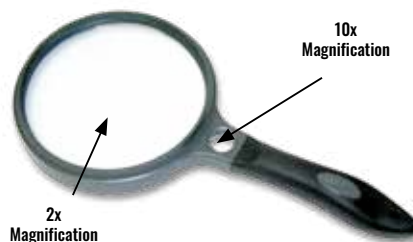
**3" Diameter
SB16441M \$7.15**

**4" Diameter
SB16442M \$7.30**

SureGrip™ Magnifiers

2X power magnifiers with ergonomically designed soft-grip rubber handle and all glass lens. Features a 10X lens for the finest details. Includes soft-padded zipper pouch. 9½" x 4½" x ¾".

SB43704M \$30.15



Magnifying Lens Set

Great for curious kids! Made of durable plastic. 2" W x 5 12" L. 3X magnification. Box of 24 in assorted colours.

SB30348M \$114.85



Low-Cost Rectangular Magnifier

50 mm x 100 mm (2" x 4") glass lens. An ideal student magnifier for studying insects, shells, plant parts, rocks, minerals, and other small specimens. One piece handle and frame is molded of sturdy black plastic. Offset handle permits unobstructed use. Designed for laboratory or field trips.

SB18869M \$4.25



Smartphone Inspector

Transform any smartphone or tablet into a mobile microscope! View coins, rocks, 3-D objects, and more right from your cell phone. Zoom in, take pictures, or capture video close up when using the adapter. Connects to any smartphone. Features 60X illumination, LED and UV lights, and adjustable viewing distance. Includes clip and carrying pouch.

SB52507M \$13.75





1. Hand Magnifier

Student magnifier molded of optical grade acrylic. 3X magnification with a 1½" diameter lens.

03800 \$1.70 each

2. Hand Magnifier

Dual magnifier, 3X and 5X. This handy, unbreakable plastic magnifier has a 3X lens that is 4.5 cm in diameter, and a 5X lens that is 1.7 cm in diameter. Overall length is 11.5 cm.

15330 \$1.25 each

3. Tri-Lens Hand Magnifier

Made from sturdy plastic for student use. 2X, 6X, and 8X magnification. Lens diameter: 25 mm.

SB26577M \$3.95 each



Triple Folding Pocket Magnifier

Triple-lens magnifier with three 5X lenses for possible magnifications of 5X, 10X, and 15X. Lens diameter: 22 mm.

SB26079M \$6.35

Tripod Magnifier

Black aluminum tripod. Plastic lens holder has worm screw adjustment. Two 1" precision polished bi-convex lenses magnify 10X.

03785 \$17.35 ea.



Table-top Tripod Magnifier

Rest this 4X magnifier on the table, floor, or ground, to view any object that catches your fancy! 23 cm high.

56396 \$64.95



Magnifiers 2X

High-quality glass lenses with durable plastic frames and handles.

15382 75mm dia. \$4.90

15384 90mm dia. \$5.90



Round Glass Magnifiers

Glass with plastic frame and handles. General purpose suitable for all laboratory and classroom applications. Plastic handle is designed for better conformity to natural grip of hand. 2X power.

2" dia.
03789 \$7.90

3" dia.
03790 \$9.95

4" dia.
SB16445M \$12.55



Economical Large Dual Magnifier

Features durable plastic body with two glass lenses. The 5X lens with 2-1/8" dia. viewing area works well for basic magnification, while the ¾" lens with 8X power is ideal for providing extra detail while remaining separate from the main lens. 6¼" L. Pkg. of 12.

SB48968M \$41.95

Sheet Magnifier

Easy to use ideal for small hands. Low cost and easy to store. Up to 3X magnification. Size 22 x 14 cm.

733640 \$6.50



LAB SUPPLIES

SLIDES

Plastic Slide Lab Pack

Ideal for beginning life science students. Set includes 50 unbreakable slides and cover slips (22 mm square). A booklet of 50 sheets of lens tissue is also included.

SB16377M \$17.15



Glass Microscope Slides with Rounded Corners

No sharp corners! Pre-cleaned slides are made of quality sheet glass with ground edges. 75 x 25 x 1.0-1.2 mm thick. Box of 72 slides.

SB50588M \$9.85



Plastic Microslides Round Well

3" W x 1" H slides are standard size. Made of flexible clear plastic with a concave well that is perfect for viewing pond water or other liquids. Slides are reusable. Package of 10 slides.

SB40764M \$2.85

Square Micro Cover Glasses

Ideal for use in laboratories where the best technical quality possible is desired at budget prices. Available in the most popular sizes, these quality cover glasses are excellent for routine microscopy and school use. No. 1 thickness range: 0.13—0.17 mm. No. 2 thickness range: 0.17—0.22 mm.

18 x 18 mm, No. 1 thickness.
Box of 100 Slips.

S08463M \$1.80 box

22 x 22 mm, No. 1 thickness.
Box of 100 Slips.

S08464M \$2.00 box

22 x 22 mm, No. 2 thickness.
Box of 100 Slips.

S08465M \$3.00 box



REUSABLE!

Sticky Slides

Simply remove protective covering, stick specimen to the slide, and view. Normal outdoor lighting works well. Clean up is a breeze. Simply rinse the slides in water and dry with a damp cloth. Use again and again. The 6" strips are conveniently perforated at 1½". A 1½" slide works well for elementary standard mirror or prism-optic microscopes. A 3" (or more) slide works well for stereo microscopes. Package of five strips yields 20 slides.

732022 \$19.85



Plastic Coverslips

Unbreakable, flexible, and noncurling. 18 mm x 18 mm or 22 mm x 22 mm square. Specify size.



18 mm x 18 mm.
Per box of 100.
SB47348M \$4.15 ea.
10 or more boxes \$3.75 ea.

22 mm x 22 mm.
Per box of 100.
05895 \$7.20 ea.
10 or more boxes \$5.50 ea.

Slide Box Holds 100 Slides

Provides protection for microscope slides in slanted numbered slots. Constructed from polypropylene, slide box holds 100 standard (1" x 3") slides. Hinged lids are held securely; box closes with molded latched lock. No interior liner. Measures: 210mm (l) x 169mm (w) x 37 mm (h).

733564 \$14.20



Slide Box Holds 50 Slides

Durable storage boxes provides convenient protection for 50 (1" x 3") micro slides in slanted slots. Constructed from polypropylene. Hinged lid is held together securely with molded latched lock. Won't warp by humidity and is insect proof.

733566 \$8.00

Slide Box Holds 25 Slides

Indexed, compact and durable this 25 slide box is constructed with smooth high impact polypropylene plastic with removable lid that provides the best in microscope slide protection. Heavy walls will not warp and the material is unaffected by humidity and is insect-proof. Cover and bottom are stackable for convenient storage.

733568 \$7.00



Micromounts™

Pack of 50. A unique way for students to mount, view and present their own specimens. Simply peel off the tape, place specimen (leaf, insect, wing, drop of water) and fold.

56334 \$13.80



Bibulous Paper

Highly absorbent, white fiber paper. Recommended for drying slides and other small lab glass items. 4" x 6" booklet contains 50 sheets.

SB08543M \$4.25



Microscope Slides

Clear. Size 1" x 3" x 1.0 mm thick. Box of 72.

48444 \$5.50



Plastic Micro Slides

Disposable micro slides made from optically clear Rinzi vinyl. Will not break, scratch, or cut fingers. Ideal for all types of mounting. Economically priced, easily used and discarded. Size 1" x 3" x .0180-0.22 thick. 144 slides per box.

731308 \$19.95



Microscope Slides Concave

Clear. Size 1" x 3" x 1.0—1.2 mm thick; 16 mm diameter; .50 mm depth.

Single, Concave,
Box of 12.
SB15360M \$7.05

Single, Concave,
Box of 72.
48016 \$32.55





Prepared Slides Cell Development and Reproduction

Set of 10 prepared slides includes: mitotic stages in red bone marrow; mitotic stages in tests of mouse t.s.; sea-urchin cleavage stage; growing egg in ovary of bird t.s.; plant mitosis, l.s. of onion root tips; plant stages in red bone marrow; growing tissue in stem apex t.s.; plant meiosis t.s. young Lilium anthers; and mature pollen grains of Lilium w.m.

SB44055M \$25.55

Prepared Slide Sets

These sets provide the most comprehensive introduction to the wonders of Biology and Zoology. Packed in practical and attractive wooden box. Every slide features an individual description of the related specimen in eight languages. Every set is introduced and commented on by a professor of a renowned university. Sets of 25.

SB47785M Vertebrate (Including Mammalian)

SB47786M Insects

SB47787M General Biology

SB47788M The Cell & Animal Tissue

SB47789M Invertebrate and Insects

Each **\$54.45**



Student Grade Human Body Complete Slide Set

Fascinating slides feature specimens taken from humans. Every slide features an individual description of the related specimen in eight languages. The languages are: English, French, Italian, Spanish, Greek, Portuguese, German, and Dutch. Slides measure 5 in. W x 1-1/2 in. H. Packages of 10 slides. All sets come in a plastic case. Includes one package of each of Human Body 1 (SL10014) and Human Body 2. Includes blank slides.

SL10013M \$47.65

Also available separately:

Human Body 1. Includes: blood smear, epithelial mouth cells, striate muscle l.s., cerebrum t.s., tonsil with lymph nodules t.s., lung t.s., skin l.s., stomach t.s., red bone marrow, and testis, t.s.

SL10014M \$23.55



Prepared Slides Set

Set of 25 slides comes in an attractive wooden storage box for easy access. Slides include: mitoses in plants; pollen grains, w.m.; amoeba, w.m.; yeast cells, w.m.; green algae/spirogyra, w.m.; letter "e"; tape worm, t.s.; silk fabric, w.m.; lily leaf, v.s.; mammal lung, t.s.; meiosis in animals; Aves feather, w.m.; lily stamen, t.s.; mammal hair, w.m.; mosquito mouth parts, w.m.; housefly mouth parts, w.m.; frog blood smear; human blood smear; onion cells, w.m.; hibiscus stem, t.s.; wool fabric, w.m.; fish scale, w.m.; skeletal muscle, w.m.; herbaceous stem, young, t.s.; and skin cells, v.s.



General Biology Survey Slide Set

Comprehensive in scope, this set surveys major animal phyla, and plant divisions. It explores human and mammalian tissues, and compares and contrasts mono and dicot roots, stems, and leaves. It encompasses examples of sexual and asexual reproduction, and incorporates parasitic, saprophytic, and free-living forms. Examples of natural textile fibers are included as well. Set of 100 slides. Comes complete with a handsome hardwood storage box. Dimensions: 9" x 8" x 2".

SL10017M \$372.45



Prepared Slide Set - Insects, Set of 10 Slides

Specimens include: 1) Earthworm Section 2) Tapeworm Section 3) Leech Section 4) Honey Bee Leg 5) Ant Section 6) Honey Bee Mouth 7) Housefly Foot 8) Housefly Wing 9) Butterfly Squama 10) Insect Compound Eye.

77648 \$38.60

Prepared Slide Set - Plants, Set of 10 Slides

Specimens include: 1) Plant Root 2) Winter Jasmine Leaf 3) Pine Leaf 4) Moss Antheridium 5) Fern Leaf 6) Pine Stem 7) Epidermal Cell Onion 8) Pollen 9) Corn Seed 10) Wheat Seed.

77647 \$38.60

Prepared Slide Set - Animal, Set of 10 Slides

Specimens include: 1) Fowl Feather 2) Cow Hair 3) Cat Hair 4) Pig Hair 5) Blood Smear of Frog 6) Peacock Feather 7) Fish Squama 8) Wool Hair 9) Dog Hair 10) Rabbit Hair.

77646 \$38.60



Prepared Slide Mini Sets

These prepared slide sets are designed to dive a little deeper into a specific group of things we cannot see with our eyes. Each set includes five related prepared slides and an insert which describes the specimens and offers some fascinating information about each set.

730140 Blood and Guts \$24.75

730141 Creepy Crawlies \$24.75

730142 Extraordinary Ordinary \$24.75

730143 Flower Power \$24.75

730145 Fun Guys \$24.75

730147 Incredible Edible Plants \$24.75

730149 Lily Pad Leap \$24.75

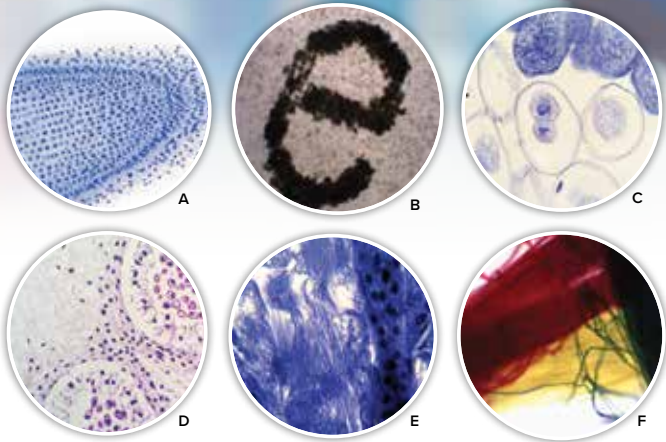


LAB SUPPLIES

SLIDES

KEY TO ABBREVIATIONS

- w.m. - whole mount
- c.s. - cross section
- l.s. - longitudinal section
- sec. - section of unspecified orientation
- sq. or sm. - squash or smear preparation
- o.s.s. - on single slide



Prepared Microscope Slides

A. Plant Mitosis,
(Onion Root Tip) sec.
Package of 10.

733882 \$51.24

B. Letter e, w, m.
Package of 10.

733574 \$36.70

C. Animal Mitosis (Horse Ascaird
Eggs) sec.
Package of 10.

733880 \$58.59

D. Plant Meiosis (Lily Anther) sec.
Package of 10.

733884 \$51.24

E. Animal Meiosis
(Locust Testicle) sec.
Package of 10.

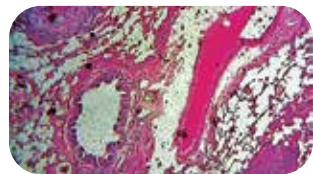
733886 \$58.59

F. Thread Slide
Package of 10. Yellow on
Blue on Red.

733578 \$51.24

G. Fiber
Slide,
Cotton,
Linen,
Hemp.
Package
of 10.

**733576
\$36.70**



Prepared Slide Sets

Introduce the world of microscopy to your students through this selection of prepared slide sets. High-quality, 1" x 3" slides labeled and stored in a plastic slotted container.

Human Pathology. Set of 12 slides includes human blood anemia, lung cell cancer, capillary tumor, gallbladder cholecystitis, lung tuberculosis, intestines adenoma, and six other specimens.

SB47764M \$97.15

Mammalian Reproduction. Set of 15 slides includes placenta, ovary, sperm, testis, fallopian tube, uterus, embryo, unfertilized egg, prostate, and six other specimens.

SB47765M \$52.90

Lilium Meiosis. Set of 7 slides cover different phases and divisions of Lilium ovary and Lilium anther.

SB47767M \$67.85



Prepared Microscope Slides Set

Introduce the world of microscopy to your students through this selection of prepared slides. High-quality, yet affordable, 1" x 3" slides labeled and stored in a slotted plastic container.

Small Organisms

64116 15 pcs \$40.74

Meiosis

77639 7 pcs \$70.30

Mitosis

77640 2 pcs \$48.14

Animal

77641 12 pcs \$32.24

Parts of an Insect

77642 12 pcs \$32.24

Plant

77643 12 pcs \$32.24

Human Physiology

77644 16 pcs \$86.94

Forensics

77645 17 pcs \$58.28

Microbial World

64120 15 pcs \$40.74

Basic Zoology

64122 15 pcs \$40.74

Mammalian Physiology

730214 15 pcs \$83.69

Introductory Biology

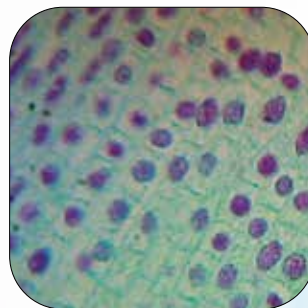
64118 15 pcs \$40.74

Basic Botany

64114 15 pcs \$40.74

Microbiology/Genetics

730216 5 pcs \$34.44



Fish and Onion Mitosis Slide Set

Compare animal against plant mitosis. Allium (onion) slide shows root tip and all stages of mitosis present. Whitefish slide shows a section of blastodisc for animal mitosis demonstration. Two slides in the set.

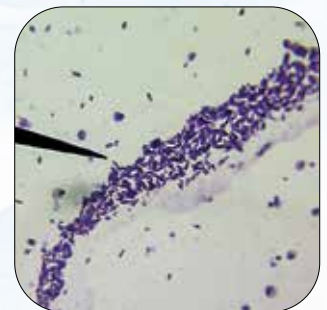
SL10290M \$38.70

Deadly Human Diseases, Set of 10 Slides

High quality examples of some of man's best known deadly diseases. Explore their cellular structure and visible qualities. Stored in a slotted plastic container.

- Anthrax (*Bacillus anthracis*)
- Tetanus (*Clostridium tetani*)
- Botulism (*Clostridium botulinum*)
- Typhoid fever (*Salmonella typhosa*)
- Epidemic dysentery (*Shigella dysenteriae*)
- Tuberculosis (*Mycobacterium tuberculosis*)
- Suppurative and putrefying infections (*Proteus vulgaris*)
- Virulent pneumonia (*Klebsiella pneumoniae*)
- Hemolytic infections such as strep throat (*Streptococcus pyogenes*)
- Blue-pus infections such as wound and burn infections (*Pseudomonas aeruginosa*)

SB52191M \$97.50

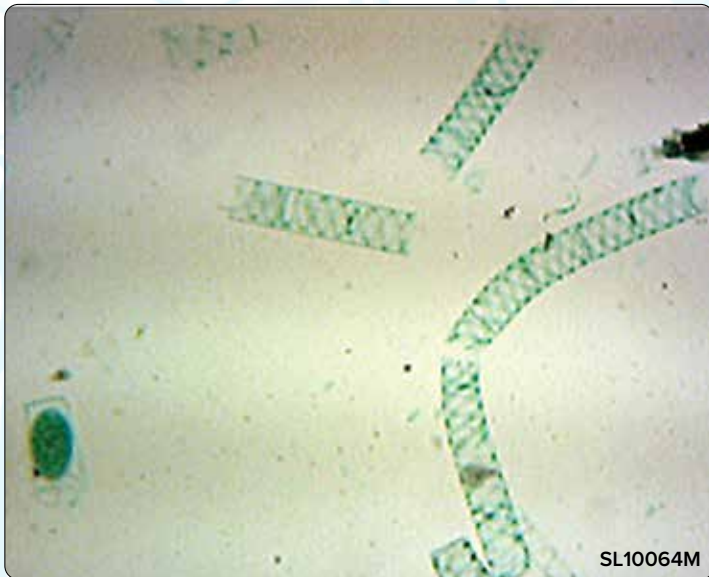


KEY TO ABBREVIATIONS

- w.m. - whole mount
- c.s. - cross section
- l.s. - longitudinal section
- sec. - section of unspecified orientation
- sq. or sm. - squash or smear preparation
- o.s.s. - on single slide



SL10059M

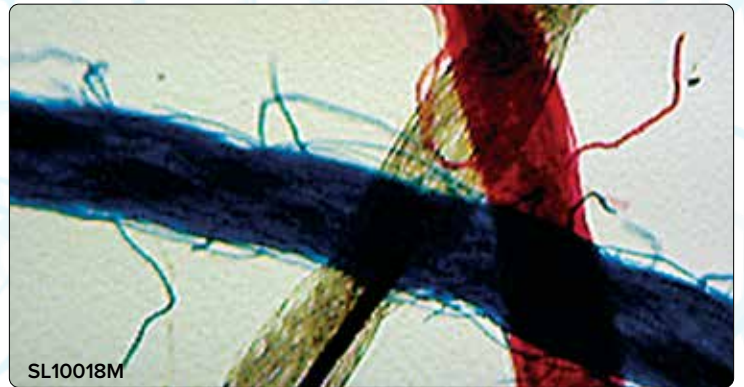


SL10064M

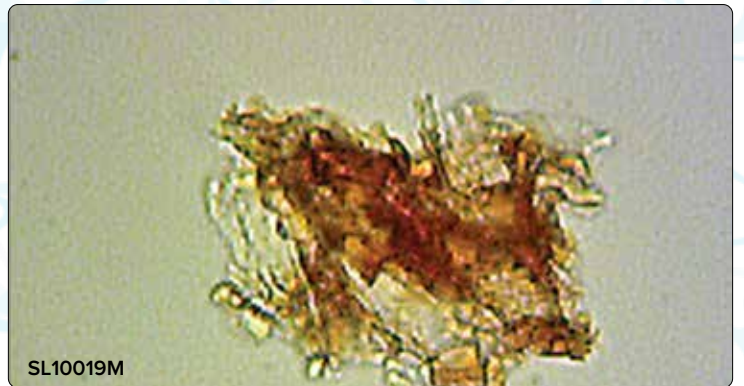
Green Algae

SL10059M Green algae, six mixed types **\$7.95**

SL10064M Spirogyra, vegetative, w.m. Perfectly turgid filaments, nucleus with protoplasmic strands very vivid **\$7.95**



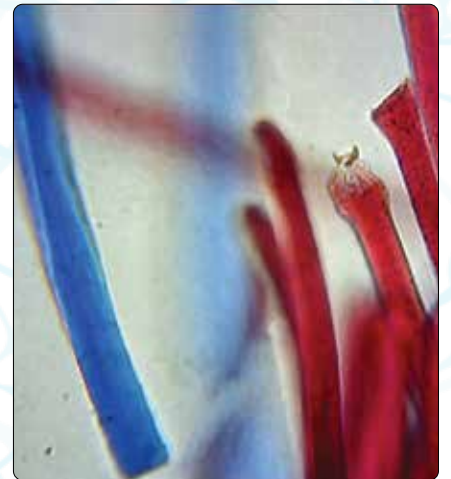
SL10018M



SL10019M



SL10023M



SL10028M

Microscope Slides for the Beginner

SL10018M Coloured thread, w.m. Yellow on blue on red. Threads crossed, designed to aid in the teaching of focusing of a microscope **\$4.25**

SL10019M Cork section **\$4.45**

SL10023M Letter "e", w.m. Useful for introducing students to the microscope by demonstrating reversal of direction and image **\$3.75**

SL10028M Textile fibers, w.m. four types of natural fibers: flax, silk, wool, and cotton **\$4.45**



LAB SUPPLIES

SLIDES

Phylum Sporozoa

Organisms have no structures for locomotion

SL10098M Mixed protozoa, w.m. This special preparation includes species comprising the four major phyla. Representatives from Sarcodina, Mastigophora, Ciliophora, and Sporozoa are present in abundance **\$7.95**

Monocot Roots

SL10116M Allium (onion), root tip, l.s. All stages of mitosis present. Chromosomes vividly stained deep red by Feulgen nuclear reaction for DNA. Lightly counter-stained, showing cytoplasmic features **\$7.05**

SL10117M Allium (onion), root tip, l.s. for mitosis. Iron hematoxylin stain **\$9.35**

SL10118M Allium (onion), root tip, c.s. and l.s. All stages of mitosis shown. Cross sections at several levels give polar views of mitosis. Feulgen stain **\$11.55**

SL10120M Allium (onion), root tip, squash, Feulgen stain. Single layer of intact cells: chromosomes beautifully demonstrated against almost colourless background **\$9.75**

Dicot Stems

SL10142M Tilia americana (basswood), 2-year stem, c.s. **\$4.95**

Monocot Leaves

SL10145M Allium (onion), leaf epidermis, w.m. **\$6.75**

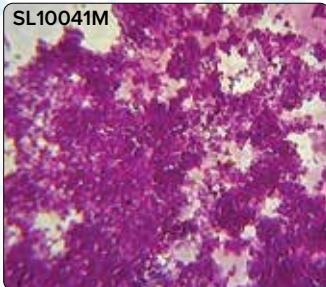
SL10147M Zea mays (corn) leaf, c.s. Mesophyll, epidermis, stomata, and bulliform cells well demonstrated. Monocotyledonous parallel arrangement of evenly spaced vascular bundles **\$6.05**

Dicot Leaves

SL10150M Ligustrum (privet) leaf, c.s. Typical mesophyte **\$6.05**

SL10151M Syringa vulgaris (lilac) leaf, c.s. Commonly studied "typical" mesophyte **\$6.75**

SL10041M



SL10045M



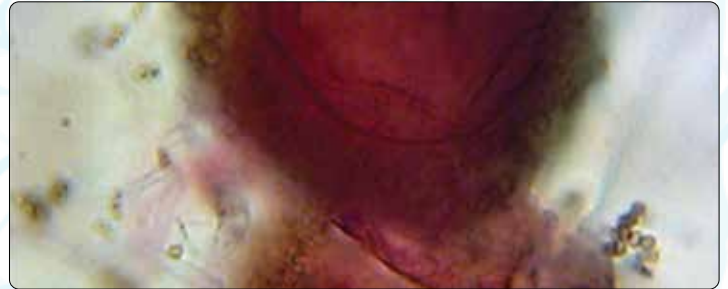
Bacteria

SL10041M Bacteria, three shapes. Individual smears **\$4.45**

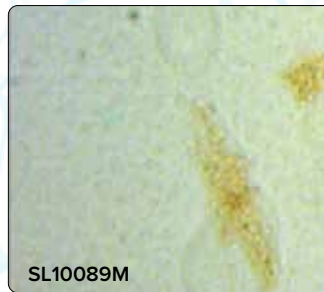
SL10045M Escherichia coli. Smear from culture. Found as a normal inhabitant of the intestines of man and other vertebrates **\$6.75**

KEY TO ABBREVIATIONS

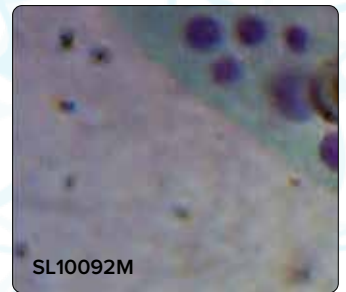
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SL10076M Molds, w.m. Three common molds (Aspergillus, Rhizopus, and Penicillium) on one slide **\$5.95**



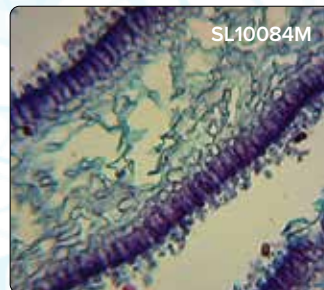
SL10089M



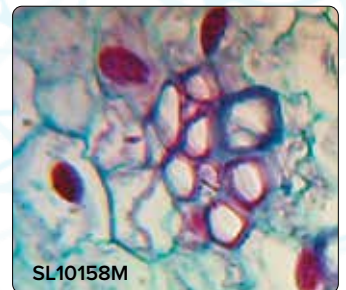
SL10092M

SL10089M Euglena, w.m. Well-stained specimens in abundance **\$7.95**

SL10092M Paramecium caudatum, w.m. Large number of individuals stained for general structure **\$5.55**



SL10084M



SL10158M

Class Basidiomycetes Basidium Fungi

SL10084M Coprinus (mushroom), c.s. through entire specimen **\$7.95**

Megasporogenesis In Lilium Michiganense

SL10158M Lilium (lily), ovary, c.s. General structure **\$6.75**

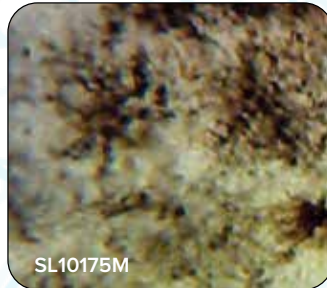


KEY TO ABBREVIATIONS

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Class Turbellaria Planarians

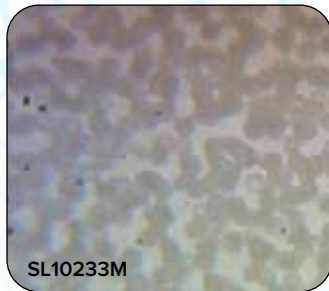
SL10175M Planaria, w.m. plain to show flatworm general structure **\$6.75**



SL10175M

Blood/Vascular System

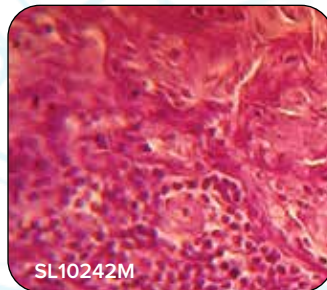
SL10233M Blood smear, Wright's stain — human **\$6.75**



SL10233M

Muscular Tissue

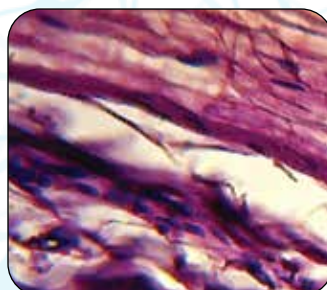
SL10242M Muscle, three types, sections, for a comparative study of the three muscle types — human **\$10.45**



SL10242M

Nervous System

SL10249M Nerve, c.s. and l.s. — human **\$9.05**



Class Crustacea Crustaceans

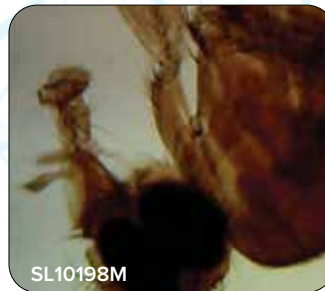
SL10194M Daphnia, w.m. Several specimens on one slide **\$6.75**



SL10194M

Class Insecta

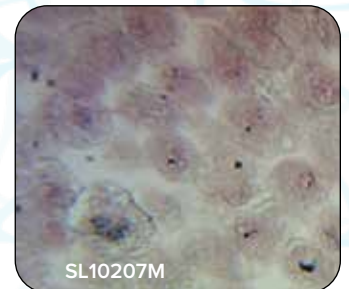
SL10198M Drosophila (fruit fly), male and female, w.m. One male and one female per slide. Sexual characteristics are evident **\$6.75**



SL10198M

Class Osteichthyes Fish

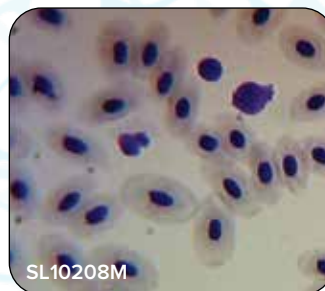
SL10207M Whitefish, mitosis, section of blastodisc. An excellent slide to demonstrate animal mitosis **\$27.85**



SL10207M

Class Amphibia Frogs, Mud Puppies, and Salamanders

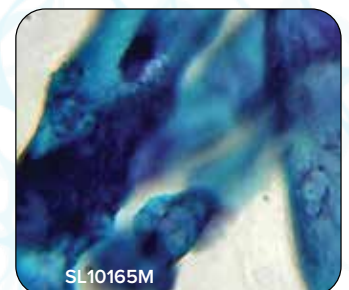
SL10208M Blood smear (frog), Wright's stain **\$4.45**



SL10208M

Class Hydrozoa Hydroids

SL10165M Hydra, plain, w.m. **\$6.75**



SL10165M



MEASUREMENT

THERMOMETERS



Exclusive
KIT

Spectrum's Primary Thermometer Kit

Includes 30 student thermometers, soil thermometer, thermometer stamps, all purpose thermometers and much more all packed into a plastic tote for storage.
730681 \$239.92



IR Thermometer

Simply hold the IR gun, press the trigger, and aim the laser guide at the target. Results immediately appear in °C or °F on the large backlit LCD and are automatically held for seven seconds after the trigger is released. Auto power off. 9V battery operation (included). Range is -4° - 518°F. Accuracy: ±6°F. Dimensions: 8" L x 3" W x 1 3/4" D.

731408 \$77.55



Instant-Read Dial Thermometer

Accurate from 0° F to 220° F. Shatter-proof plastic lens. Convenient pocket case. Durable stainless steel stem.

SB39402M \$6.15



Multi-Purpose Digital Thermometer

This digital thermometer has a measuring range of -50°C to 300°C (-58°F to 572°F). On/off switch with automatic power off after 10 minutes. Battery included, with up to 60,000 hours of use. Includes protective sheath with pocket clip.

735073 \$16.50



Indoor/Outdoor Wired Digital Thermometer

This thermometer displays indoor and outdoor temperature measurements with time and date. Features include: Indoor/Outdoor temperature, min/max memory, 3 m / 9.8 ft wired sensor probe, time and date, °C/°F switchable, large LCD display, temperature trend, time and alarm features and freeze alarm.

733614 \$32.50



Economy Thermometer

150mm red alcohol filled thermometer mounted on a white polystyrene back. Range: -60°C to 50°C.

78216 \$2.00

Celsius Classroom Lab Thermometer

Metal-backed, with -30° C to +110° C scale with 1° and 5° divisions. Large, easy-to-read numbers. 5" red liquid-type tube. 6-12" long. Pkg. of 10.

732556 \$30.35



Giant Classroom® Thermometer®

Largest working thermometer available for class display. 30" wall-mounted thermometer has 23" tube on a wooden base. Shows C/F scales with ranges from -40° C to 50° C and -40° F to 120° F.

TB15831M \$49.05



Student Thermometer

Measures both Fahrenheit (-30°F to 230°F) and Celsius (-30°C to 110°C).

SB47751M Set of 5 \$23.95



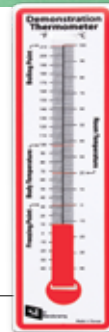
C/F Student Thermometer

Large, easy-to-read markings for -20° to 50° C and 0° to 120° F. White polystyrene backing. 6 1/4" long. Filled with red liquid. Pkg. of 10.

TB19654M \$14.15

Student Demonstration Thermometer

6 x 25cm. Pack of 10.
730176 \$25.55



Indoor/Outdoor Thermometer

Range is -30° to 50° Celsius and -20° to 120° Fahrenheit. Size: 380 mm.

731027 \$11.50



Indoor / Outdoor Jumbo Wall Thermometer

733216 \$13.30



Indoor Thermometer

Features: Range: 15°C to 50°C / -5°F to 120°F. Hygrometer, °C/°F scale.

733622 \$11.50

Echo Thermometer

76762 \$2.50



Pen-Shape Digital Thermometer with Min/Max Memories

Use for cooking, laboratories, classrooms, and industry. Extra wide temperature gauge, -10° to 200° C and 15° to 392° F. Min/Max memory with 1.5V battery included. Heat resistant 4" stainless steel probe. Also





General Purpose Teflon® - Coated Thermometers

Teflon® coating means no nasty cuts or broken glass to worry about when accidents happen - the Teflon® sleeve remains intact and makes cleanup a snap. Thermometers are filled with a blue column of organic liquid against a bright yellow background to provide clear readings. Yellow back glass with silk screen printed blue scales, and reverse side indicating immersion, are completely indelible and resistant to aggressive chemical agents. A unique triangular ring top stops the thermometer from rolling off the desk or work surface. 1° C divisions.



Cat. No.	Range °C	Immersion	Price
SB33542M	-20° to 110°	Total	\$28.45
SB33545M	-20° to 150°	Partial	\$28.45



General Laboratory Red Liquid Thermometers

Red liquid thermometers are safer than mercury, and can be used in all general laboratory applications including hot ovens and incubators. 12" length.

Single Scale

Cat. No.	Range Low High	Scale	Subdivision	Back	Immersion	Each	10 or More, Each
SB14147M	-20° to 110°	C	1°	White	Partial (76 mm)	\$2.55	\$2.20
SB14148M	-20° to 110°	C	1°	White	Total	\$2.55	\$2.20
SB14149M	-20° to 150°	C	1°	White	Partial (76 mm)	\$2.55	\$2.20
SB15198M	-20° to 150°	C	1°	White	Total	\$2.55	\$2.20

Double Scale

Cat. No.	Range Low High	Scale	Subdivision	Back	Immersion	Each	10 or More, Each
SB15197M	-20° to 110° 0° to 230°	C F	1° 2°	White	Partial (76 mm)	\$2.55	\$2.20
SB14150M	-20° to 150° 0° to 230° F	C F	1° 1°	White	Total	\$2.55	\$2.20



Student Thermometer

Resembles common laboratory thermometers except that it has a 6" length. Filled with safe red liquid. Packaged in a nonroll sleeve.

RANGE: -10° to +110° C.
2° subdivision.
SB14280M \$9.45 ea.

RANGE: -10° to +110° C/0° to 220° F.
1° subdivision for C; 2° for F.
SB19157M \$8.00 ea.

Boiling Point Thermometers

Used for measuring the boiling points of various liquids. These durable, nontoxic thermometers measure from -22° F to 240° F (-30° C to 120° C). Safe to use, the thermometers are made from plastic and are mercury free. Set of 10 thermometers in a reusable storage box.

SB42013M \$37.45



Scienceware® Thermometer Holder

Protect expensive thermometers and make them more easily readable. The molded polypropylene holder clips onto the edge of a beaker or other vessel to hold a thermometer vertically near the side of the container. Bag of three.

SB25150M \$23.00



MEASUREMENT THERMOMETERS

Primary Thermometer Kit

Includes 30 student Thermometers, Demonstration Thermometer, Indoor/Outdoor, Outside, Soil Thermometers, 30 blank student Thermometers and Thermometer Stamp all packed into a Caddystack.

78196 \$139.92

A. Student Thermometers

13cm red alcohol thermometers recessed in moulded plastic backs to minimize breakage. -50°C to 110°C

78206 \$2.70

B. Demonstration Thermometer

Comes with adjustable band and both Fahrenheit and Celsius scales. Boiling, room, and freezing temperatures are marked. Measures 57.5 cm x 14 cm.

78202 \$12.05

C. Primary Colour-Coded Thermometer

Comes in Celsius.

72678 \$2.50

Glass Thermometers

Laboratory-grade thermometers. Red liquid filled and individually packed in a polyester case.



Partial Immersion

77678 -10 to 200°C \$3.10

77681 -20 to 150°C \$3.10

78220 -20 to 110°C \$3.10

Total Immersion

78226 -10°C to 150°C \$3.10

77679 -10 to 200°C \$3.10

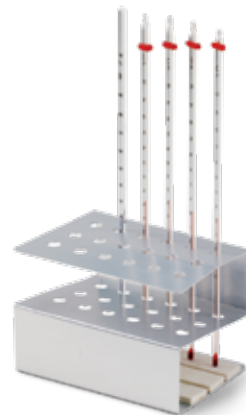
77680 -20 to 150°C \$3.10

78222 -20 to 110°C \$3.10



Scienceware® Thermometer Storage Rack

Holds up to 25 thermometers in the correct vertical position to prevent separation which may occur when thermometers are stored improperly. Constructed of polypropylene with sturdy base and large carry handles. Teacher's Note: All thermometers should be stored in a vertical position. Hole diameters in top and middle plates are 5/16"; base plate drain holes are 1/8".



Thermometer Stand For 18

Convenient and practical, this sturdy aluminum thermometer stand features stove enamel finish and rugged construction. The protective rubber foam bottom prevents thermometer bulbs from being damaged. Holds up to 18 thermometers.

SB42001M \$30.45



MEASUREMENT

BALANCES & SCALES



OHAUS® Triple Beam Balances

Rugged enough to withstand overloads and still keep delivering accurate results for years. Outstanding engineering ensures easy reading, quick zeroing, and repeatable results. Magnetic dampening minimizes oscillation and speed weighing. Spring-loaded zero adjust compensator. Capacity: 610 g. Sensitivity: 0.1 g. Versatile option for teachers includes Rod and Clamp Accessory for specific gravity determination (SA09239M, sold separately). Capacity can be increased to 2,610 g by purchasing optional attachment weights (SA04482M, sold separately). Includes teacher resource CD. Five-year warranty.

Cat. No.	Model	Platform Type	Tare	Each
732662	750-S0	Stainless Steel Pan	No	\$369.95
SA09238M	760-00	Stainless Steel Platform	Yes	\$419.05
SA09229M	710-00	Removable Stainless Steel Pan	No	\$403.55



Triple Beam Balance

Features rugged die cast construction, precision ground steel knife edges, dual magnetic dampening systems to slow oscillation, and a large stainless steel weighing platform. 610 g capacity. Platform size: 15 cm. One year warranty.

SB43077M \$167.55

Triple Beam with Weight Set. 2610 g capacity.

SB43078M \$186.35

Attachment Weights for Triple Beam Balances

Weights are hung on one or both suspension pivots located at the right end of the beam. Includes one 500 and two 1000 gram weights for metric scales.

SA04482M \$90.30



Triple Beam Balance

Features rugged, die-cast construction, precision cast beams and pivot joints, magnetic dampening system to reduce pan swings, polished agate bearings, and hardened knife edges to withstand heavy use. Three beams, stainless steel pan, 710g capacity with 0.1 sensitivity.

78092 \$149.45



Elementary School Balance

This all-purpose balance covers your balance requirements from Grades 4-10. Molded from high-impact styrene, this durable and accurate balance has a capacity of 2000g and is readable to 1g. Features a zero adjust knob and two removable 10cm square pans. Activity guide included. Included: 8-piece brass mass set: 50 gram, 20 gram, 10 gram, 2 x 5 gram, 2 x 2 gram, and 1 gram weights.

79354 \$34.40



Primary/Junior School Balance

This durable balance will aid in determining mass of liquids and solids. The buckets are clear plastic for easy measurement and are shaped to help in the centering of the materials. Comes with plastic weight set (2 x 20g, 4 x 10g and 5 x 8g) and metal weight set (2 x 1g, 2g, 5g, 20g and 1 x 50g). Activity guide included.

731508 \$41.95



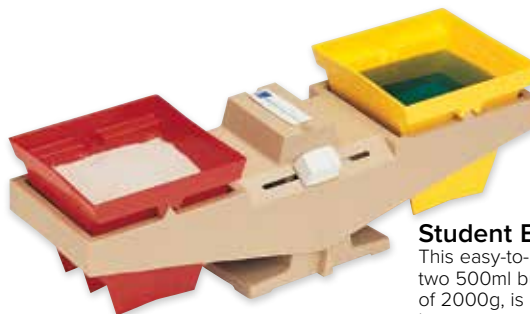
Primary Bucket Balance

Measure, explore volume and make comparisons of solids and liquids with this sturdy bucket balance with lids. Removable calibrated clear buckets hold solids of up to 400ml of liquid. Easy pour spout makes measuring liquids easy. Lids can be used as platforms and the built-in drawer is perfect for storing weights.

78032 \$34.50



Use lids for platform measuring



Student Balance

This easy-to-read balance has two 500ml buckets, a capacity of 2000g, is readable to 1g, and has an easy-to-use sliding zero adjustment. With coloured buckets

79558 \$18.15

Double Pan Balance

Employs a two-pan design based on the classical Roberval balance principle. Commonly used for comparative weighing. 2000g capacity. Platform size: 15cm. Includes one each of 100 g, 200 g, 500 g, and 1,000 g weights. One year warranty.

SB42943M \$245.15





- Factory-installed security slot
- Built-in tripod legs (accessory for 610 g balance)
- Larger, sturdier body
- Stainless steel pan
- Integral weight-below hook
- Protractor, ruler, and conversion chart
- Built-in mass holder
- Quality mechanics
- Trusted manufacturer
- 0.1 readability

Adam TBB Triple Beam Balances

The TBB triple beam balance offers the functions and durability teachers need with a choice of 610 g and 2610 g models. Quality construction with strong metal housing and a stainless steel pan. Features a factory-installed security slot built right into the housing. Includes three graduated-tier beams for the best center-point readings and speedy zeroing with counterbalance knob. Conversion chart, ruler, and protractor on the housing make the TBB triple beam balance a complete measurement tool. Available with or without tare.

SB44703M 610 g without tare. Three-year warranty. **\$209.55**

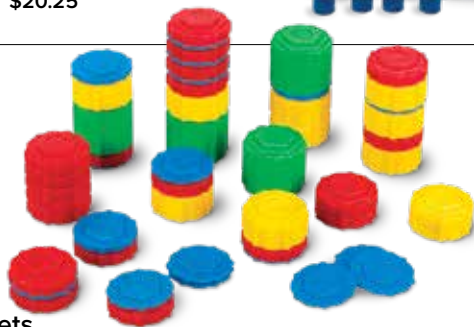
731512 2610 g without tare. Built-in tripod legs. Five-year full warranty. **\$225.75 ea.**

SB42618M 2610 g with tare. Built-in tripod legs. Five-year full warranty. **\$287.25 ea.**

Primary Balance with Plastic Weights

A basic, easy-to-use, economical pan balance. Includes eight 20 g and four 10 g weights.

SB49560M **\$20.25**



Weight Sets

These coloured coded stacking masses help students see mass relationships at a glance. Each colour represents a different thickness and mass. Includes plastic storage box.

Set of 54. Weights include twenty 1 g (blue), twenty 5 g (red), ten 10 g (yellow), and four 20 g (green).

78116 **\$12.05**

Set of 35

Colour-coded stacking masses from 5-20g.

78118 **\$9.95**

Interlocking Gram Centimeter Cubes

Open up new dimensions in metrics with these colourful versatile cubes. Each edge measures 1 cm and each surface is 1 cm². A single cube has a volume of 1 cubic centimeter, displaces a milliliter, and has a mass of 1 gram. They are precision-made to snap together with ease, so students are able to create any shape imaginable. No other product provides the opportunity for so many creative activities. Explores colour perception; numbers and quantifying; and linear, volume, and mass measurements. In individual and group activities, students can quickly discover such metric relationships as: 10 cm = 1 dm, 100 cm² = 1 dm², and 1000 cm³ = 1 dm³.



MEASUREMENT BALANCES & SCALES



OHAUS® Model 311 Balance

- Spring-Loaded Zero-Adjust Compensator
- Insensitive to Out-of-Level Conditions
- Specific Gravity Apparatus Included

With time-tested durability, the Ohaus® 311 model is a favoured balance in schools and laboratories. This scale provides positive poise positioning, notched and tiered beams, and is magnetically damped to slow oscillation. Agate bearings, steel knife edges, and stainless steel pans ensure resistance to rugged handling. This model contains a platform recessed in the base, which can be raised for specific gravity determinations. Capacity: 311 g. Sensitivity: 0.01 g. Five-year warranty.

Cat. No.	Capacity	Sensitivity	Each
S00914M	311 g	0.01 g	\$481.15



OHAUS® School Balance with Mass Set

The perfect teaching tool for elementary students. Removable plastic pans (5 1/2 x 5 1/2) & easy to read zero adjustment ensures accuracy and repeatability. Dual pointers allow viewing from both sides. Balance includes: 1-1 g, 2-2 g, 1-5 g, 2-10 g, 1-20 g, and 1-50 g weights.

732666 **\$149.15 ea.**



Food Scale

5kg capacity, calibrated each 25g. Removable pan, large, easy-to-read dial, and durable spring mechanism.

78100 **\$15.75**

Centimeter Gram Cubes

Great for measuring and weighing. Each of these non-interlocking cubes weighs 1 g. Assortment of 10 bright colours.

Set of 1,000.

TB16756M **\$27.15**



Weighing Paper

Super smooth, strong, non-absorbent, moisture-proof, and nitrogen-free. Pkg. of 500 sheets.

15 x 15 cm
731252 **\$17.75**

Polystyrene Weighing Boats

Lightweight, disposable weighing dishes can be used for liquids or solids. Smooth surface and rounded corners provide for easy removal of samples. Suitable for all types of balances. Size: medium, 3-5/16" x 3/4".

SB16660M Per pkg. of 500 **\$60.65**



MEASUREMENT

BALANCES & SCALES



Compact Digital Scale

An electronic classroom scale featuring a tare button, auto power off, large digital display, plus a mode button for grams, pounds, and ounces. Capacity: 5,000 g/176.4 oz. Accuracy: 1.0 g/0.1 oz. Requires four "AA" batteries (included). **730321 \$39.95**



Digital Scale

Scale features a dishwasher safe bowl on base that inverts for convenient storage. Also has tare function. Capacity 4.40 lbs. (2 kg) in 1/8" oz. (1 g) increments. Requires four "AA" batteries (included). **77831 \$24.20**



OHAUS® Compact Scales

The ideal scales when cost matters and dependable results are a must. These uniquely designed scales have a wide variety of applications, more than any other scale in their class. The three portable models range in capacities from 200 g to 5200 g, and are perfect for use in the classroom. Features: easy operation, long battery life, sleek low-profile design, large high-contrast display, energy-saving auto shut-off feature (after five minutes of no activity; battery operation only), digital calibration from keypad, overload and underload indicators, rugged plastic construction, zero range to capacity by subtraction, and battery or AC powered. Optimum operating temperature: 64° to 77° F (18° to 25° C). Pan size: 5-5/8" x 5". Overall dimensions: 7-7/8" L x 5-5/16" W x 1-5/8" H. Requires three "AA" alkaline batteries (included) or AC adapter (not included).

Cat. No.	Capacity	Readability	Linearity (g)	Weighing Units	Each
735157	220 g	0.1	±0.1	g and lbs./oz.	\$218.35
735158	2200 g	1.0	±1.0	g and lbs./oz.	\$229.85
735159	5200 g	1.0	±2.0	g and lbs./oz.	\$276.00

Compact Balance

Unrivalled in capacity and readability compared to other compact balances, this balance boasts a combination of performance, value, and durability. Its stainless steel pan and solid ABS housing make this compact balance rugged and easy to clean. Weighs in grams, ounces, and pounds. The sealed keypad helps protect internal components from dirt and spills. Its compact size makes it easy to store and transport. Battery operation means you can use it anywhere, while auto power-off helps conserve battery life. Stainless steel pan measures 5 1/8" x 5 1/8". Requires two "AA" batteries included; can also be operated with an AC adapter (not included). One-year warranty.



Cat. No.	Model No.	Readability	Max. Capacity	Each
SB49642M	CB 501	0.1 g	500 g	\$163.00
SB49643M	CB 1001	0.1 g	1,000 g	\$170.00
SB49644M	CB 3000	1 g	3,000 g	\$147.45



NASCO Electronic Balance

These rugged electronic balances come with the following standard features: integrated weigh below hook, stackable design, shipping load cell lock, overload protection up to 200 lbs., 50 hours of battery life with auto shut off, security bracket (cable not included), draft shield flip top with integrated sample tray, and three-button human interface. Weighing units are grams and Newtons only. Draftshield is a flip-top design with access to chamber through an innovative center opening. The flip-top acts as a protective stackable cover, as well as complete draft protection. Top cover center opening is also a sample tray "weight boat" when removed and turned upside down. Requires AC adapter (included) or three "AA" batteries (not included).

SB42894M 150 g x 0.01 g readability **\$543.35**

SB42895M 300 g x 0.1 g readability **\$333.75**

SB42896M 900 g x 0.1 g readability **\$489.00**



Classroom Compact Scale

An electronic classroom scale featuring a tare button, auto power off, and large digital display, plus a mode button for grams, pounds, and ounces. Capacity: 5,000 g/176.4 oz. Accuracy: 1.0 g/0.05 oz.

732670 \$64.50

Personal Scale

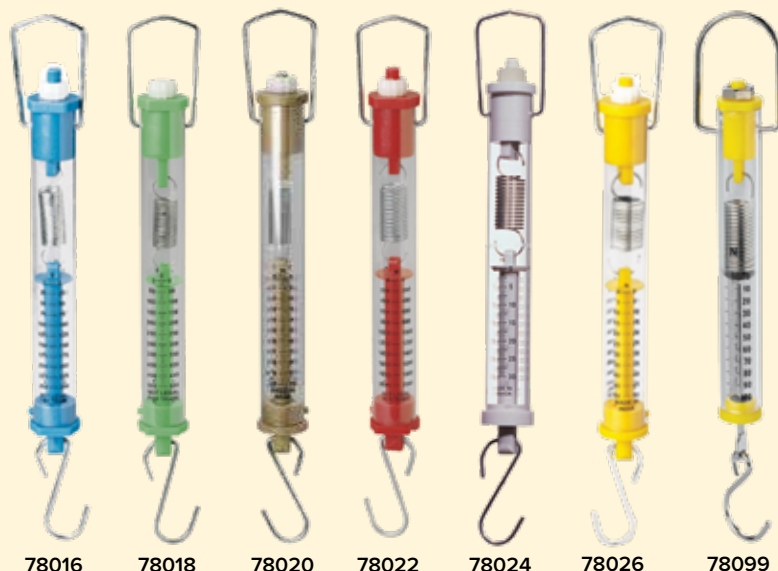
Introduce students to basic concepts of mass measurement in both the metric and English systems as they weigh themselves. Sturdy metal construction. 300-lb./130-kg capacity.

TB14876M \$21.85



MEASUREMENT

BALANCES & SCALES



78016 78018 78020 78022 78024 78026 78099

Dual-Calibration Spring Scales

Colour-coded, inexpensive spring scales that provide direct readings for both force and measurements. Each is calibrated in both grams and Newtons. The body tube is constructed of clear plastic, which allows the students to see the action of the spring. Ends are colour-coded based on capacity. The top of each is leveled for easy use with an inclined plane. Each scale can be fully zeroed.

Cat. No.	Capability	Price
78016	250 g/2.5 N	\$2.85
78018	500 g/5 N	\$2.85
78020	1000 g/10 N	\$2.85
78022	2000 g/20 N	\$2.85
78024	3000 g/30 N	\$2.85
78026	5000 g/50 N	\$2.85
78099	10,000 g/100 N	\$2.85



OHAUS® Demonstration Spring Scale

Dial-type spring scale is large enough to be seen from a distance for teacher demonstrations.

SB21390M 20 N x ½ N. \$108.55



2-in-1 Force & Spring Meters

The unique design of the Force Meter / Spring Balance means that they not only weigh suspended objects but in addition, using the extended rod, can also measure the force of pushing or pulling an object. They are colour-coded, calibrated in grams and Newtons and have a clear flat area on the rod so you can, using a dry wipe marker, create your own scales. An instruction and ideas sheet is included.

79264SS Force Meter 250g	\$13.30	79270SS Force Meter 2kg	\$13.30
79266SS Force Meter 500g	\$13.30	79272SS Force Meter 3kg	\$13.30
79268SS Force Meter 1kg	\$13.30	79274SS Force Meter 5kg	\$13.30



Memory Force Meters

Measures force by pushing or pulling an object. Calibrated in both Newtons and grams. Clear plastic tube allows students to see the action of the spring. Includes activity guide.

Cat. No	Capacity	Colour	Each
SB50546M	1,000 g	Beige	\$9.15
SB50547M	2,000 g	Red	\$9.15
SB50543M	3,000 g	White	\$9.15
SB50542M	5,000 g	Yellow	\$9.15



Steel Spring Scales

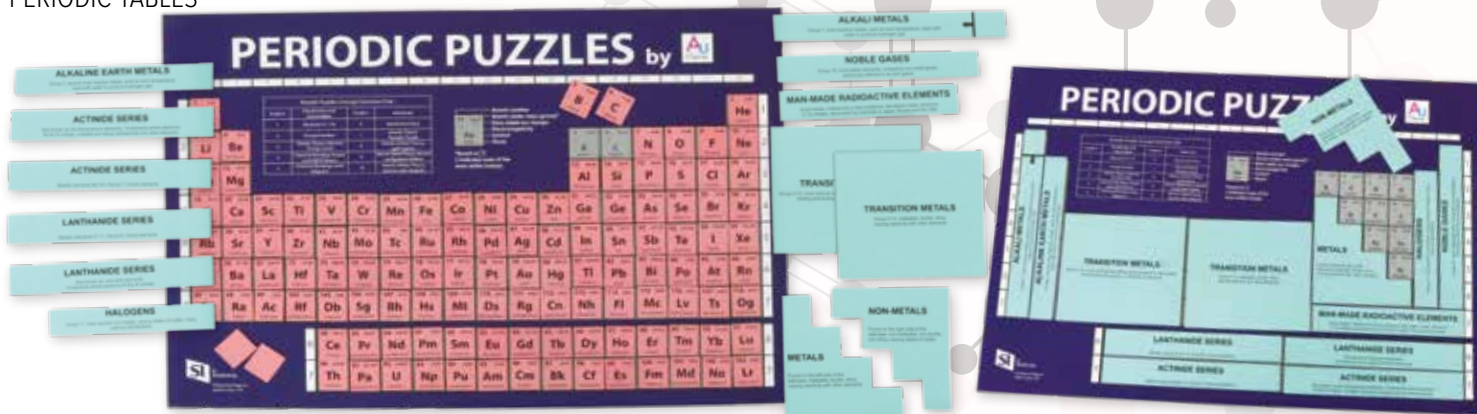
78076	0-100g/1 Newton
78078	0-500g/5 Newton
78080	0-1000g/10 Newton
78082	0-2000g/20 Newton
78086	0-5000g/50 Newton
77683	250 x 10g/9oz x ¼oz
77684	500 x 20g/18oz x ½oz
77685	2000 x 25g/72oz x 1oz
77687	2.5 x 1N/250000 x 100000D
77688	5 x 0.2N/500000 x 20000D
77689	10 x 0.2N/1000000 x 20000D
77690	20 x 0.5N/2000000 x 50000D

\$5.60 each



CHEMISTRY

PERIODIC TABLES



Periodic Puzzles By Auchemy

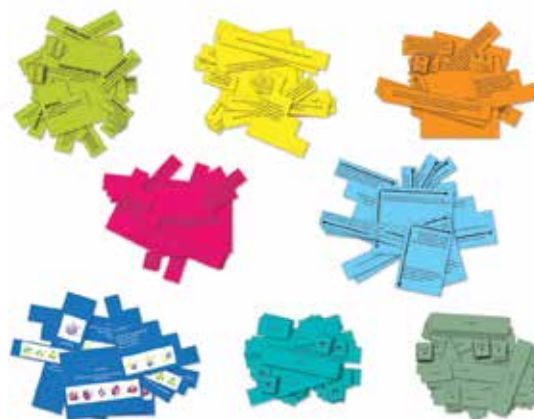
Teach the periodic table with this versatile periodic table puzzle. The board is metal to allow the magnetic pieces to stick to the surface. The board includes the elements name, symbol, electronegativity, most stable ion charges, atomic molar mass and atomic number. Includes the newest elements added to the periodic table! Teach element recognition and patterns on the periodic table with 118 element tiles 0.9" x 1" (2.2 x 2.5 cm). Includes the symbol, atomic number and atomic molar mass on each tile. A second set of tiles showcases how to breakdown the periodic table into 10 groups or families. Board measures 12.7" x 18.6" (32.2 x 47.2 cm). Teacher's guide included. **2330M \$31.50**

Periodic Puzzles by AuChem - Add-on Sets

Expand upon our Periodic Puzzles by AuChem Intro Set with these additional intermediate and advanced chemistry puzzles. Each set of puzzle tiles is identified by a different colour. Teacher's guide included.

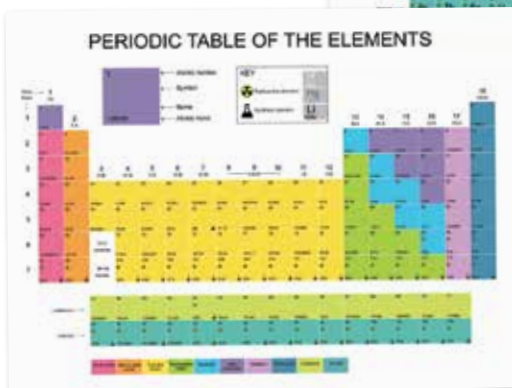
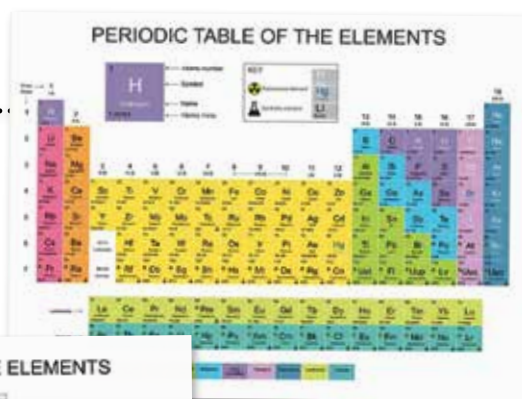
- The Intermediate Puzzle Sets # 3-6 (4 puzzles) teach *Atomic Theory, Chemical Bonding Theory, Chemical Bonding Lewis Diagrams, and Electrochemistry Concepts.*
 - The Advanced Puzzle Sets #7-10 (4 puzzles) teach *Periodic Trends, spdf Orbital Regions, Electron Configuration/Address, and Electron Spin Diagrams.*
- Does not include the *Periodic Puzzles by AuChem* board (#2330M).

735597 \$29.50



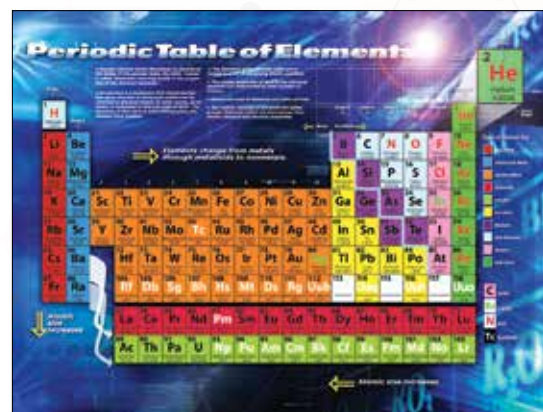
Filled In Table

To help students grasp the different elements and master this science staple.



Blank Table

Allows students to fill in the element names and master this science staple.



Super Size Periodic Table of the Elements Poster

This durable, long-lasting vinyl poster measures 48" x 64" and is filled with colourful, eye-catching presentations with key information for 118 elements. Colour-coding makes it easy to see and understand relationships among elements. Includes basic instructions on reading the table and information on the composition of elements. Comes with grommets for easy hanging. **SB46808M \$294.85**

Magnetic, Dry-Erase Periodic Table

The 23" x 34" Magnet will adhere to any magnetic whiteboard or chalk board and is a great solution for at-the-board demonstrations.

735176 Blank \$49.60

735177 Filled In \$49.60

Easy-Cling, Dry-Erase Periodic Table

The 24" x 34" Easy-Cling chart will adhere to any flat & smooth surface, ideal for whiteboards. A great solution for at-the-board demonstrations.

735178 Blank \$42.50

735179 Filled In \$42.50



Happy Atoms

Using a set of atom models representing different elements, students can assemble their own molecular models. Atoms stick-together easily with magnets. The digital component takes this molecular modeling system to the next level. Using the Happy Atoms app and the camera on your tablet or smartphone running iOS or Android, you can scan molecules you build. After a molecule is discovered, the app presents information about it, including its composition, usage, properties, hazards, formula, and structure. The app can recognize up to 10,000 molecules. It presents in-depth information for about 150 molecules and general information about the rest.

Introductory Set. 17 atom models represent six different elements.

735012 \$91.30

Complete Set. 50 atom models represent 16 different elements.

735013 \$246.30

Educator's Bundle. 250 atom models representing 16 different elements.

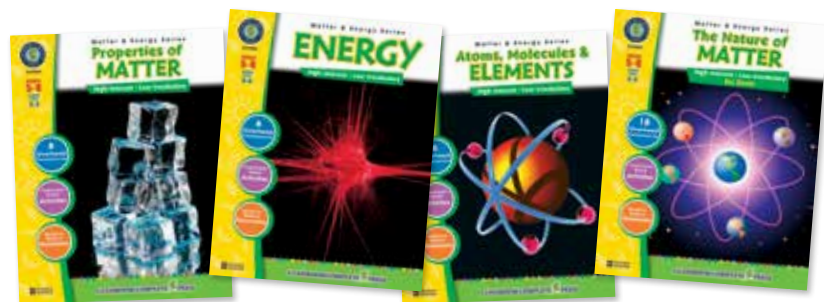
735014 \$1,218.30



Model Plus: The Atom

An up-to-date model of the Bohr atom. Depicts the recent scientific discovery of the atom with a "fuzzy cloud" of electrons rather than the electrons orbiting in neat ellipses. Model is made of resilient, non-toxic EVA foam to withstand years of active investigation. Detailed teacher's guide includes inquiry-based lab activities, reproducible worksheets, complete background information, assessment ideas, and more. Model measures 19" x 13" x 3".

730728 \$92.70



Matter & Energy Series

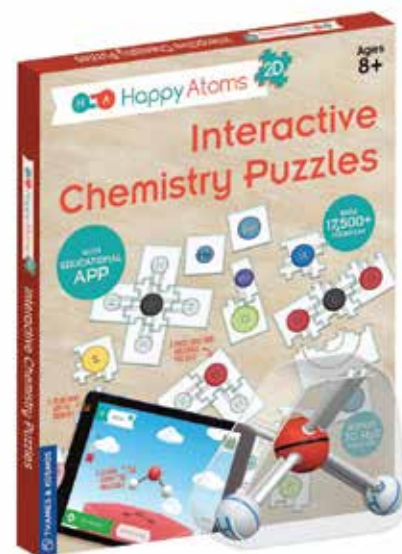
Discover what matter is, and isn't. Learn about solids, liquids and gases, properties and changes in matter, and the difference between a mixture and a solution. These books are jam-packed with experiments, reading passages, and activities. Overhead transparencies and answer key included. 60 pages, 6 full colour overheads each.

731262 Properties of Matter \$13.65

731266 Energy \$13.65

731264 Atoms, Molecules & Elements \$13.65

731268 Nature of Matter (All 3 books combined) \$27.30



Happy Atoms 2D: Interactive Chemistry Puzzles

Making sense of the world of atoms and molecules is now as easy as piecing together a jigsaw puzzle! Now you can use Happy Atoms, the revolutionary chemistry teaching tool, in a low-cost, two-dimensional jigsaw-puzzle-style edition. In this version, the three-dimensional plastic atoms have been replaced with flat, cardboard puzzle pieces. Just like in the original versions, you can build more than 17,000 molecules by combining the atoms of 16 elements and scanning them with the app to identify the molecules and learn about them. This kit comes with the same full-featured version of the Happy Atoms app that comes with the original versions of Happy Atoms.

735606 \$34.95



Innovating Science™ Demonstration Kits

Here is a fantastic way to effectively provide your students with meaningful chemistry demonstrations without the high cost and time-consuming preparation. Each self-contained kit has enough material for 5 complete chemistry demonstrations, with nothing to add and no leftovers. All instructions are included.

The Silicate Garden

A few coloured crystals are added to a clear solution in a glass jar or beaker. Within a few minutes large plant like structures extend from the crystals.

1330M \$59.70

Chemiluminescence

Explain and view chemiluminescence. Observe how luminol is converted to and excited state in the presence of an oxidizer such as hydrogen peroxide. As the excited state molecule decays or returns to the ground state, energy is produced as light.

1322M \$39.50

Chemical Battery

Construct a simple wet cell battery. When complete it will generate 1.5 volts for 20–30 minutes. Several cells can be connected in series to increase the voltage or in parallel to increase the current.

1324M \$44.45

Oscillating Reactions - The Traffic Light

A flask containing a yellow solution is gently swirled and the solution turns red. When the flask is shaken the solution turns green.

1328M \$35.60

Exothermic Reactants

Study the process of Exothermic reactions. The reaction is safely carried out in a plastic bag. The students can pass the bag around to feel the reaction.

1332M \$39.80

Endothermic Reactions

Study the process of Endothermic reactions. The reaction is safely carried out in a plastic bag. The students can pass the bag around to feel the reaction.

1334M \$36.60



Characteristics of Matter Kit - Kemtec

This kit allows students to explore the characteristics of matter such as colour, odour, solubility, density, alkalinity, acidity, states of matter, texture, boiling point, and melting point. Students also get the opportunity to observe chemical properties of five solutions by observing their reaction with other solutions. Students then determine the names of the two unknown solutions. Includes a reproducible manual with 10 activities, vocabulary definitions, and answer key. Laboratories include properties of matter, states of matter, properties of solids and liquids, and more.

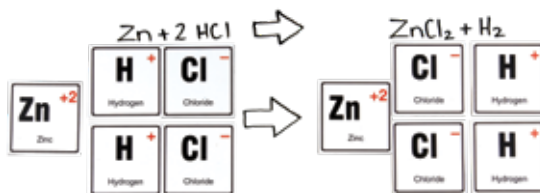
731270 \$270.85



Analysis of Simple Mixtures Kit

Demonstrate the difference between mixtures and compounds with this unique kit. Learners are provided with three unknown compounds, then they develop systematic and scientific solutions to separate the unknowns using five standard methods of separation: Flotation, magnetic separation, solution and recrystallization, melting and resolidification, and sifting. Kit contains enough material for 30 students to work individually. Teacher's Guide and reproducible student worksheets included.

731276 \$184.35



Stick to Science Chemical Nomenclature Cards

- Sticks to both black and white boards
 - Designed for both nomenclature chemistry systems
 - 140 cards representing common cations and anions
 - 4 blank write-and-wipe magnetic cards
- The teacher's guide includes lesson outlines and reproducible student work sheets

730167 \$48.55



Stick to Science Magnetic Periodic Table Investigation

- Sticks to both black and white boards
 - Used to illustrate several major concepts: Families & Periods, Atomic Numbers & Mass, Electron Shells & Valency, and Isotopes
- This set includes elements 1-20 plus: Hydride (H-), 14 additional elements (4 x H, 3 x O, 2 x CL, 1 x F, 2 x NA, 2 x K), 3Mg Isotopes, and Au & Pb. Teacher's notes also included. Grades 7+.

50200 \$31.50





Identification of Chemical Reaction Kit — Lab-Aids® No. 84

Students learn through standard laboratory procedure to identify three types of chemical reactions: colour changes, precipitates, and gas generation. Seven known solutions are mixed into any of 21 possible combinations by the students, and then observed. Complete for 50 students.

SA08231M \$224.95

SA08525M Refill (chemicals only). **\$120.45**

Chemistry Bit Set

Set of 14 mini-chemistry kits. Topics include: Polarity of Water, Spectrum, Super Water Absorber, Crystal Gel, Crystal Tree, Disappearing Ink, Rubber Latex, Quantum Leap, Chemiluminescence, Magic Colour Crystals, Alginate Gel, Thermochromic Things, Photochromic Paint, and Colour Changing Markers. Each includes several activities and experiments, enough material for several trials, and a booklet with instructions and concepts. Great for demonstrations and independent projects.

SB39050M \$72.75



Red Cabbage Jiffy Juice

Very stable and easy to use red cabbage extract powder. A safe, all food grade material with low odour and a long shelf life. Will make several gallons of strong red cabbage juice. Includes: 20 g Red Cabbage Jiffy Juice (red cabbage extract, dextrose, and citric acid), plastic beaker, small scoop, pipet, pH chart, and instructions.

SB39241M \$16.55

Polymers — Making Fluorescent Worms Kit

Allow students to learn about polymers and cross-linking using this fun and colourful activity. Students add a solution of sodium alginate to three calcium chloride solutions, each containing a different fluorescent dye. After a few minutes, the liquid sodium alginate solution forms into gel-like polymer "worms." Upon completing the activity, the worms may be placed under a black light, where students will see them glowing red, blue, and green. Contains enough material to make several dozen polymer worms.

SB51064M \$58.50



Chemical Equations I

Students have the opportunity to perform two different single replacement reactions and two different double reactions. Observed are colour change, formation of precipitates, and production of gases. Includes term sheets, activity sheets, laboratory exercises, a crossword puzzle, and a test. Activity sheets give the students practice in writing chemical symbols and formulas for elements and radicals (polyatomic ions) and writing formulas for compounds. This kit is designed for 28 students working in groups of 4. Experiment can be repeated twice.

SB43452M \$139.65



Chemiluminescence Lab Activity

Teach students about physical and chemical reactions that involve the release of light and heat energy. Students will learn about a light-emitting reaction called chemiluminescence, or "cool light." They will create a chemiluminescent reaction in the classroom, and then observe the fascinating blue glow of the reaction, which lasts for over 10 minutes. Includes fifteen 25 ml bottles of luminol solution, 25 ml of 6% hydrogen peroxide, fifteen 30 ml plastic cups, and 15 transfer pipettes. Enough materials for 15 groups.

SB46579M \$85.55



The Cool Blue Light Experiment Kit

Make a cool blue light appear in the dark. Make a "dirty" penny glow. Learn about how fireflies glow, chemiluminescence, and the real quantum leap.

SB31106M \$14.85



CHEMISTRY

GENERAL

Available in
English &
French!



Just Add Egg Study of Reactions

This bio-organic kit, offers egg-citing activities for students to explore!

Activities Included:

- Egg shell geode
- Egg dying
- Egg in a bottle
- Vacuum egg
- Naked and disappearing egg
- Make your own dinosaur egg

735445 \$40.90

Science Lessons:

- Study of chemical reactions
- Experiments with pressure difference
- Study of membranes

Just Add Baking Soda Learning of Bio Chemistry

Future scientists and artists agree that this kit is explosive! This kit is the perfect mix of science and art for all creative kids.

Activities Included:

- Eruption print
- Baking soda volcano
- Dancing gummy worms
- Baking soda powered boat
- Stalactites & stalagmites
- Baking soda crystals
- Lemon juice experiment
- And many more.

735444 \$36.75

Science Lessons:

- Understanding alkaline
- States of matter
- Chemical reactions



Just Add Fruits & Veggies Study of Bio Organics & Systems

What do you do with all your old fruits and veggies – no need to throw them out! This cool kit will deliver hours of exploration, creativity, learning and enjoyment.

Activities Included:

- Multiple fruits & veggies stamps
- Celery stamped owl craft
- Potato battery
- Capillary action with veggies
- Osmosis experiment
- Growing plants
- And many more.

735446 \$32.40

Science Lessons:

- Chemical reactions
- Study of electricity
- Osmosis
- Germination



Just Add Glue - Study of Polymers

Create different forms of super stretchy polymers and make them bounce! Using the same set of ingredients, make an array of creative crafts that you can keep, like slime, crystals and window clings. Learn about states of matter with Just Add Glue™

Activities Included:

- Make your own sun catcher
- Make your own bouncy ball
- Make your own crystals
- Make your own window clings
- And many more.

735447 \$32.25

Science Lessons:

- Study of polymers
- Chemical reactions
- States of matter

Just Add Sugar Study of Reactions

This bio-organic kit, Just Add Sugar™, will sweeten the interests of budding artists and scientists alike! Make your own candy, sugar cubes and then clean up with your own homemade soap. Five science experiments and seven art activities included.

Activities Included:

- Sugar crystals
- Sugar rainbow glass
- Ice worm pond
- Make your own soap
- And more.

735449 \$35.25

Science Lessons:

- Densities of solutions
- Chemical reactions



Just Add Sun - Study of Heat

Melt s'mores, make nachos, or even cook an egg with the power of the sun and this kit. Learn about solar energy and introduce kids to eco-friendly energy alternatives. Package doubles as a solar oven.

Activities Included:

- Mystery pop balloon
- Melting ice
- Build a thermometer
- Sundial
- Ice hands
- Wax paper sun catcher

735450 \$40.85

Science Lessons:

- Freezing and melting points
- Light absorption
- Reflections and heat transfer



Just Add Milk - Study of Surface Tension

It's time to think twice about the milk in your cereal bowl! Just Add Milk™ encourages a curiosity for science combined with a love for experimenting with art. Observe changes in surface tension and create rainbow tie-dye keepsakes.

Activities Included:

- Magic milk
- Milk painting
- Simple cosmic suncatcher
- Floating water
- And more.

Science Lessons:

- Surface tension
- Weakening molecular bonds
- Density of liquids

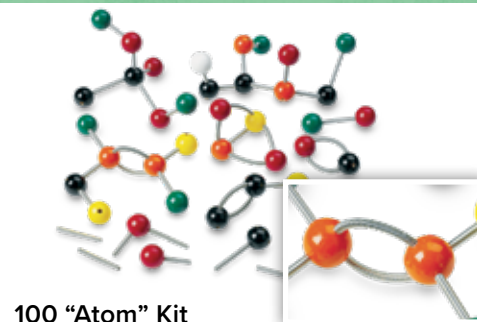




VSEPR I Molecular Model Kit

Students will make examples of linear, bent triatomic, tetrahedral, and trigonal planar molecules. The accompanying booklet explains the geometry of valence electron pairs based on VSEPR theory and molecular shape using ABE notation. Instructions are given for drawing correct Lewis structures of several molecules, which can then be built with this kit. Includes five white hydrogen atom centers, three blue nitrogen atom centers, four red oxygen atom centers, three green halogen atom centers, two black carbon atom centers, two yellow sulfur atom centers, eight clear PVC single bonds (1/4"), eight clear PVC double bonds (1/8"), background information booklet, lab procedure, student response form, and answer key. For 2-4 students.

SB50529M \$14.85



100 "Atom" Kit

Ideal for studying structures of organic chemical compounds in three-dimensional representations of molecules. Contains 100 balls representing carbon, hydrogen, oxygen, halogens, nitrogen, and sulfur. Balls are assembled with rigid springs.

SB08486M \$64.75



Molecular Model Kit, Wooden

Allows students to construct organic molecules and many inorganic molecules. Wooden atoms are drilled to accept wooden pegs or metal springs which represent bonding. To make more complex molecules, two or more sets may be combined. Kit consists of balls representing carbon, nitrogen, hydrogen, oxygen, chlorine, sodium, and potassium.

SB02039M \$57.35



Matter and Interactions Bulletin Board Chart Set

Graphic images and hands-on activities combine to provide comprehensive coverage of essential student skills. Each 12" x 18" Chart is laminated and double-sided. Side 1 features a graphic overview of the topic and Side 2 provides "write-on/wipe-off" activities. The Matter & Interactions Bulletin Board Chart Set includes the following charts:

- Matter & Its Properties
- Properties of Atoms
- Solids, Liquids & Gases

731806 \$19.95

States of Matter

Colourful 17" x 22" chart highlights main features of each state.

731274 \$6.50

Atomic Model Set

The Structural Molecular Model Set contains a number of different colored plastic spheres to represent various atoms. The atoms have holes at specific angles to accept plastic rods representing covalent and ionic bonds. The set allows you to build structural models of over 40 compounds and a graphite crystal. Set includes 58 plastic spheres-23mm in diameter, 12 hydrogen atoms and 3 metal atoms-17mm in diameter, 43 short connectors and 10 long flexible connectors. The set also includes a plastic storage box with a lid and four compartments and an instruction manual.

77658 \$36.65



SB40832M



732570

**Best
SELLER**

Molymod® Molecular Model Sets for Inorganic and Organic Chemistry

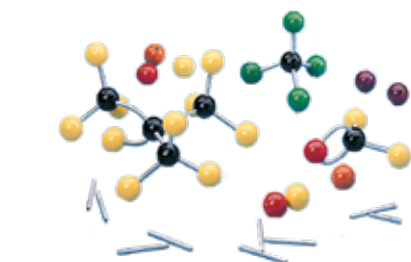
Sets contain the appropriate numbers of atom-parts and links to make a particular structure. Durable atom-parts are made of self-coloured plastic, colour-coded and compatible. Easy to assemble and disassemble.

Student Set.

Includes 52 atoms.
SB40832M \$46.15

Teacher Set.

Includes 108 atoms.
732570 \$110.35



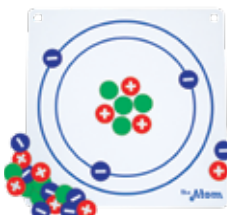
Individual Student Organic Molecular Model Structure Set

An economical molecular model set designed for individual activities in organic chemistry. Two or more sets may be combined for more complex molecules. Set consists of 35 coloured wooden balls (3/4") (six black carbon, two blue nitrogen, 15 yellow hydrogen, four red oxygen, four green chlorine, two orange sodium, two purple potassium); and coiled springs to represent the following bonds — 12 aliphatic carbon (1.5"), 12 carbon-hydrogen (1"), and six aromatic carbon (1.125"). Instructions included.

SB27445M \$28.00

The Atom

The parts of the atom are no longer abstract terms, but actual pieces that students can see and touch as they "build" atoms using this set. Included are enough magnetic protons, neutrons, and electrons to build complete atoms up to atomic number 10. The 16" x 16" background is available in either powder-coated steel or magnetic vinyl. Set contains: 10 red (+) magnetic protons, 10 blue (-) magnetic electrons, 10 green magnetic neutrons, and one background.



The Atom with Powder-Coated Steel Background. Sturdy steel background has been powder coated to provide an extremely durable surface upon which to build. Holes are provided for ease of hanging on blackboard or other hooks.

SB22526M \$108.55

The Atom with Magnetic Vinyl Background. Magnetic back will stick on most blackboards.

SB28840M \$103.35

Atoms and Chemical Bonding Flip Chart Set

The set features 10 double-sided laminated charts, each 12" x 18"

Set Includes:

- Models of the Atom
- Atomic Configuration & Bonding
- Chemical Bonding
- Ionic Bonding
- Ionic Compounds
- Covalent Bonding
- Covalent Compounds
- Naming Compounds
- Metallic Bonding
- Vocabulary Review

731816 \$59.95

Elements and the Periodic Table Flip Chart Set

731819 \$59.95

Chemical Reactions Flip Chart Set

731818 \$59.95

Physical Science Flip Chart Set

731845 \$59.95

Properties & States of Matter Flip Chart Set

731817 \$59.95



EARTH SCIENCE

COMPASS



Field Orienteering Map Compass

A combination of precision and durability. The accurate steel needle rotates on precision pivots. The liquid-filled chamber stabilizes the needle quickly for fast readings and also cushions against impacts. The compass and scale have luminous points. The compass (1 3/4" dia.) is mounted on a clear, strong plastic base (5 1/2" x 2 1/2"), features a graduated 0°-360° scale in 2° increments, and has a declination correction scale. The base has centimeters, inches, 1:50000, 1:25000, and meter scales. The base also has a built-in magnifier and four stencils for drawing three circles and one triangle. Comes with a lanyard.

SB47544M \$13.25

Compass

Attractive, medium-priced compass with a strong 2" dia. black plastic case and clear plastic top.

SB19121M \$2.55 ea.



Magnetic Compass Classroom Pack

The outer rings of these stable-needle compasses can be rotated for plotting and setting directions. The clear backs make them ideal for demonstrations using an overhead projector. Liquid-filled, 2" diameter compasses come strung on safety lanyards. Pkg. of 30.

SB51129M \$125.25

Individual Compass.

SB51128M \$7.55



Large Compass

An extra large magnetic compass in a plastic case with a clear plastic top. 3 1/2" (90 mm) dia.

SB33394M \$10.65



Compass Dice

Have students roll dice and then walk in the right direction to teach map theory. Set of 6. 8 sided.

731326 \$4.95

Magnetic Compass

A magnetic compass in a 45 mm dia., aluminum case. Features a glass top and ring. Comes with plastic pouch.

SB26081M \$6.75



Directional Compass

Includes instructions, protective cover and lanyard. Measures 5cm diameter.

79962 \$20.85

40 mm Compass

This magnetic compass has a clear visibility. The easy-to-carry case is made of durable plastic. Pack of 20.

SB37264M \$20.85





The Pioneer Globe

A 12" world national globe with Gyro-Matic mounting swings up or down to bring any area into closer view. Map areas are in vivid colours to show political boundaries. Preferred by many because of its great accuracy, detail, and mobility. Has thousands of place names. Shows mountains in raised relief. Numbered full meridian ring assembly. 16½" high.

SB16464M \$132.75



Blue Ocean Acrylic 6" Non-Illuminated Globe

You will love this 6" acrylic globe. A great product and very durable!

732471 \$34.50

The Atlantis Globe

A 12" world ocean globe in raised and indented relief on Gyro-Matic mounting with a numbered full meridian. Rotates, swings up or down to bring any area into closer view. Land areas are in true-to-life colours to illustrate mountains, deserts, forests, and grasslands. Oceans show undersea physical features in rich colouring. 16½" high.

SB16465M \$160.75



Adventurer Globe

This 12" diameter simplified political globe is geared to the very young. A raised-relief, blue ocean ball with distinctive coloured boundaries, easy-to-find geographic locations, and a durable, translucent, blue molded plastic base complete this globe. 16" H.

SB39256M \$81.35

Classroom Globe

English. Thousands of names identified, completely up to date. Raised relief, metal half meridian mounting. 30 cm.

56812 \$104.90



Topographical Inflatable Globes

Beautiful physical globe that shows the Earth with natural topographical covering. Dark blue ocean.

SB49723M 12" dia. \$23.45

SB49724M 16" dia. \$34.00

SB49725M 27" dia. \$52.65

12" Inflatable World Globe

Make a game of geography. Kids can toss this globe and identify continents, countries, capitals and oceans, or hang for display. Includes a repair kit and an activity guide.

733606 \$15.50



Inflatable Labeling Globe

Customize this write & wipe globe to enrich geography, history, literature, and social studies lessons. Locate and label continents, bodies of water, countries, trade routes and more. Features no printed words - perfect for assessments. Includes multilingual activity guide, repair kit, and display hook and string. Use the wet-erase markers. Measures 27" in diameter.

77651 \$38.50



EARTH SCIENCE

GLOBES



Write-On/Wipe-Off Giant World Map

A giant, 8 ft. 8 in. x 13 ft. world map that comes in eight easy-to-hang panels. Provides educational information on world time zones, up-to-date political boundaries, land elevation, distances and topography, ocean depths and shipping lanes, nautical miles, longitude and latitude, and major cities. Write-on/wipe-off surface allows you to mark on map with dry erase markers. Trim to fit any wall — even around windows and doors. Easy to remove without damaging walls. Map panels can be arranged in different configurations to emphasize desired areas of the world.

SB29793M \$310.35



World Map Laminated Poster

Large scale poster map in bold, bright colours and easy-to-read type. Laminated, markable. 49" x 33". Country locator lists every country in the world by latitude and longitude.

SB49729M \$41.55



Landforms Study Prints

Colourful 9" x 15" prints show dynamic forces and natural processes that form the earth and create the physical environment which influences man. The 12 large durable prints cover volcanoes, folded mountains, fault mountains, coastlines, alluvial fans, deltas, canyons, alpine and continental glaciers, stream development, and rock cycle. Teacher's guide included.

SB01702M \$49.75



39"

Geophysical World Relief Map

Large, full-colour, raised relief map shows land areas in relief and accurate colour, with political boundaries and ocean features. 38" x 20" framed.

SB13774M \$77.05



Starter Canada/World Map

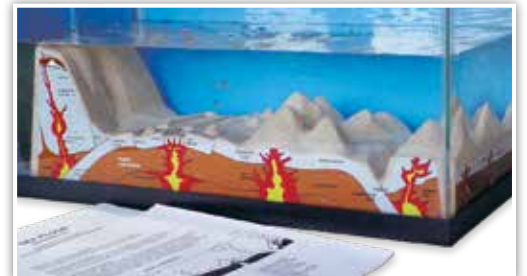
Starter Map is the best way to introduce basic geography concepts to the young learners. Bright, contrasting colours make locations stand out. Capitals, cities, rivers, lakes shown. Thematic maps included. Easy to read legend. 65" x 53" markable map on spring roller. **Globe NOT included.**

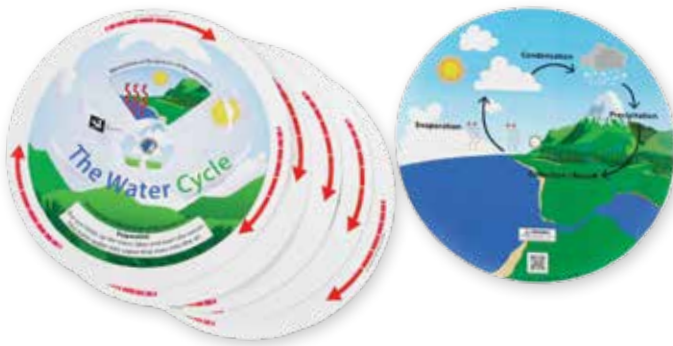
733348 \$542.75

Sea Floor Simulation Kit

Hand-held or submerged seascape model teaches students about sea floor topography, sea floor currents, and plate tectonics. When submerged in a 10-gal. tank (not included), the model can simulate current movements with coloured dye (not included) and create volcanic eruption bubbles with the use of an air pump (not included). Kit includes: sea floor model (19" L x 9" W x 6" H), air bubble lines with connectors, suction cups, profile-vocabulary decals, and teacher's guide with four classroom activities.

SB47450M \$293.85





Water Cycle Wheels

Set of 5. Introduce the water cycle with these interactive water cycle wheels. Each wheel shows the basic steps of the water cycle with a picture and description. 8.1" diameter. Teachers guide and reproducible activity included on-line.
730859 \$7.90



Water Cycle Model Activity Set

Make it rain in your classroom! Students can duplicate evaporation, condensation, and precipitation with this ingenious model. Comes with 10 study prints.
56792 \$157.85



Water Cycle 3-D Model Making Kit

Use our new interactive water cycle model to teach students about the movements of water from sea to land and back to sea! Models are powerful tools for teaching science because they provide useful simplifications of structures and processes, helping to make the unseen seen and the complex simple. Bring the water cycle to life with our exciting model! Your students build their model of a landscape and then use it to follow the flow of water through the water cycle. They can see how water is evaporated, condensed into clouds, precipitated onto the mountains and how it flows back to the sea through rivers and ground water. The rain clouds even move! The Model Making Kit includes enough materials for students to assemble up to 10 paper models working cooperatively. The comprehensive Teacher Resource Guide included provides illustrated readings, activities, key vocabulary and an assessment, along with teaching opportunities for students to Engage, Explore, Explain, Extend and Evaluate their understanding of the concepts presented.

Book Plus +++

Best SELLER



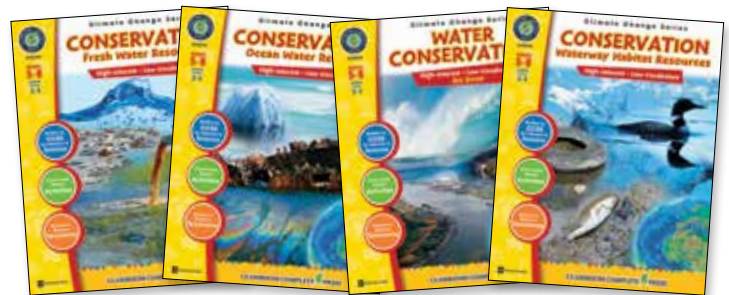
Book Plus Water Cycle Model

This colourful model and reproducible activity cards teach children about the water cycle. Made of resilient, non-toxic, EVA foam, with removable pieces that stimulate problem-solving skills and develop small motor skills. Contains background information, activities, and extension ideas. Teachers can cut out the task card and use it in a learning center or as a group activity. Model size: 25 x 36 x 2 cm thick.

69062 \$31.50

Avec le guide français

735968 \$31.50



Water Conservation

Conservation: Fresh Water Resources
 60 pages.

730722 \$13.65

Conservation: Ocean Water Resources
 60 pages.

730723 \$13.65

Conservation: Waterway Habitats Resources
 60 pages.

730724 \$13.65

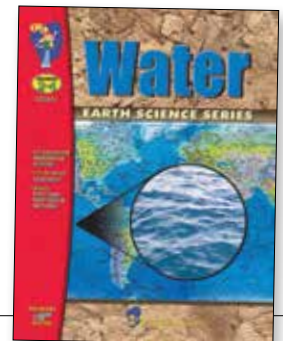
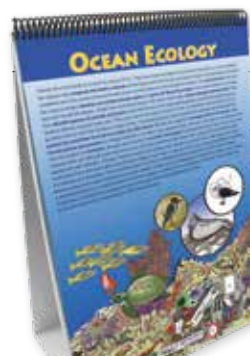
Water Conservation - Big Book
 170 pages.

730725 \$27.30

Water - Earth Science Series

Earth Science Series focuses on temperature, wind, storms, air pressure, moisture, water and weather. Cross-curricular activities build on scientific principles to help students develop scientific awareness and appreciation.
 102 pages.

68360 \$22.50



Earth's Oceans Flip Chart Set

Set includes: Ocean & Tidal Zones, Coastal Wetlands, Coral Reefs, The Everglades, Ocean Mammals, Sharks, Ocean Invertebrates, Ocean Birds and Ocean Ecology. 10 double-sided, laminated charts, each 12" x 18".

731847 \$59.95



EARTH SCIENCE

WATER

Groundwater Model

A graphic simulation of the principles of groundwater movement and contamination. Using this durable acrylic model, students will learn about the sources of groundwater, its storage and flow beneath the earth's surface, and how this resource impacts life at the earth's surface. Dyes are used as simulated contaminants to reveal how groundwater can become polluted and affect drinking water supplies. By demonstrating concepts, students learn about groundwater's critical role in the hydrological cycle. Includes easy-to-use student and teacher guides. Size: 20" L x 5" W x 12½" H.

SB39080M \$1,037.45

Groundwater Model Refill.

SB39081M \$66.45



Porosity of Soils and Water Flow Lab

In this lab, students construct models to test the porosity and permeability of various soils. Students will then measure the rate of water flow for each type of soil and use their observations to gain a better understanding of surface runoff, watersheds, groundwater formation and movement, and aquifers. Materials for 40 students.

SB48365M \$119.55



WaterWorks 9-Way Classroom Test Kit

With enough materials for 30 students, this classroom kit includes test strips for testing nine different parameters including free chlorine, total chlorine, pH, total alkalinity, iron, copper, total hardness, nitrite nitrogen, and nitrate nitrogen. Safe nonhazardous test strips feature quick, accurate, and inexpensive water testing with easy-to-follow dip and read instructions. Contents: 60 tests for each parameter, activity booklet, pipettes, and vials.

SB31266M \$160.35



Coliform Test Kit

Coliforms are a broad group bacteria mostly found in the intestines of warm blooded animals. While these organisms are not typically associated with serious illness themselves, they are often used as indicator organisms. The presence of coliforms may indicate a possible presence of other pathogenic or disease-causing organisms. With this easy-to-use and economical test kit, students simply add a small amount of collected water to a sample tube and incubate for 24-48 hours. A distinct colour change indicates that coliforms are present. Kit contains instructions and 25 lactose tubes (enough to perform 25 tests).

SB49025M \$74.00



Innovating Science™ GREEN CHEMISTRY

Water Treatment and Filtration

Students will develop a knowledge of the processes performed at a water treatment plant and understand the reasons for each process. They will perform, on a small-scale, several of the procedures that occur in a water treatment plant on "polluted" water. They will examine the changes in the water after each treatment step is performed.

SB45473M \$97.65

Leaf Pack: Experiments Stream Ecology Kit

This kit is totally reusable, flexible (adaptable to varying time constraints, number of students, and grade levels), geographically friendly, and complete. All the apparatus and guides necessary for collecting, sorting, and identifying are included. Kit contains: six mesh bags with waterproof labels, waterproof marker, stainless steel strainer, 14 sorting trays, 60 plastic Petri dishes, six waterproof illustrated sorting sheets, two thermometers, hand-held scale, two rulers, 12 brushes, 12 spoons, set of 18 full-colour flash cards, six hand lenses, Macro Lens® magnifier with sample holders, nylon twine, six zipper-top bags, and a Tree Finder booklet. Also comes with a comprehensive instructor's manual, a valuable reference guide that includes background material on stream ecology, a glossary, diagrammed instructions, experiment ideas, and field and lab data sheets.

SB29984M \$388.05



Water Sampler

An efficient and inexpensive way to sample water from any desired depth. The single-line trigger mechanism uses one line to both raise and lower the sampler as well as trigger the device to seal the collection chamber; you won't have to worry about the problems of tangled lines. The efficient flow-through design of the sampler provides an ample 1.5 liter volume of water from which temperature and dissolved oxygen content can be determined. This device is invaluable for monitoring water quality of lakes and determining how oxygen content varies with depth. Overall dimensions of the water sampler are 9 cm in diameter and 46 cm long.

SB21418M \$121.25



Fieldmaster® Student Nets

Involve your whole class in a project everyone cares about — clean water. Everything you need is included — nets have three mesh openings, and are made of durable Nitex® nylon, known for the accuracy of its mesh size, which guarantees you'll know the smallest size plankton you've collected. Includes patented Mini Dolphin™ adapter with handy 125 ml sample bottle which can be used in place of a bucket. Its patented lip design ensures all plankton are in your bottle, not on your net.

SB27276M, Fine, 80 mm \$152.95





Dissolved Oxygen Test Kit

Our dissolved oxygen test kit comes in a plastic case and contains everything needed to perform 60 tests: Refill, comparator, 25mL sample cup, and instructions. **1572M \$45.75**



Spectrum Alkalinity Test Kit

P/T Alkalinity Test Kit featuring Endpoint ID instructions. 1 drop = 10 ppm as CaCO₃.

Test kits are packaged in a durable plastic case and include all reagents, equipment and instruction cards to complete approximately 60-75 test. Colour coded reagent caps match the colour bar on the instruction card for easy identification when running multiple tests and our photogenic, step-by-step instructions keep testing simple and help users easily identify colour changes. **1574M \$65.75**

Test Tube pH Pen

Highly stable and accurate readings with a large LCD display. Designed for simple one-hand operation, this pH reader fits into standard test tubes 16 x 50 mm or larger. Automatically calibrates to pH 4, 7, and 10 buffers and can be adjusted to recognize any buffer. Features a hold function, auto power off, low battery indicator, waterproof case, and built-in electrode kept moist with a protective cap. Requires two button-cell batteries (included). **SB52136M \$78.85**



Dissolved Oxygen TRACER PocketTester™

It floats! This waterproof PocketTester™ can be intermittently submerged to a depth of 3 feet, and the waterproof feature makes cleanup easy and quick. Oxygen level displayed as % saturation from 0 to 200.0% or concentration from 0 to 20 ppm (mg/L). Adjustable altitude compensation: 0-20,000 ft. in 1,000 ft. increments. Adjustable salinity compensation from 0-50 ppt. Memory stores up to 25 data sets with DO and temperature reading. Features self-calibration on power up, data hold, auto power off, and low battery indicator. Complete with DO electrode, protective sensor cap, spare membrane cap, electrolyte, four 1.5V SR44W batteries, and 48" neck strap. **SB40757M \$780.00**



Water Monitoring Kit

No other test kit on the market compares to this low-cost, portable, easy-to-use water testing kit. Students will have fun analyzing sample water for eight different test factors. Comes complete with all the necessary apparatus, nonhazardous TestTabs®, diagrammed, step-by-step instructions and colour chart. Use this kit to explore the water quality of natural aquatic systems nearby. Contains everything you need to test for phosphate, temperature, turbidity, coliform bacteria, pH, dissolved oxygen, biochemical oxygen demand, and nitrate. Can be used to test fresh, brackish, or saline aquatic environments. **SB33597M \$64.75**

D.O. Pen

Measures dissolved oxygen to determine water quality in environmental testing, labs, industrial and municipal waste water, aquariums, and fish hatcheries. Designed for simple, one-handed operation with automatic temperature compensation and calibration to air. The polarographic probe has a built-in temperature sensor and easy-to-replace, pop-off probe heads. Simultaneously displays dissolved oxygen and temperature readings. Temperature range: 32° F to 122° F (0° C to 50° C). Waterproof. Comes ready to use in a soft carrying case with belt loop, two spare probe heads, electrolyte, and four "AAA" batteries (included). **SB47707M \$650.00**



EARTH SCIENCE

WATER

Innovating Science™ GREEN CHEMISTRY

Detergents and the Environment

Understand the consequences of cultural nutrient overloading on the aquatic environment. Demonstrate and monitor the effects of two detergent builders on natural water samples. Visually quantify the differences between phosphate and non-phosphate detergent builders on aquatic organisms.

1323M \$57.75

Qualitative Introduction to Water Pollution Kit — Lab-Aids® No. 19

Students become aware of the significance of water pollution by chemical examination of natural and treated water. Qualitative tests are performed by students on natural and treated water, and the degree of pollutant can be compared by the depth of colour. Ten common pollutants are identified, as well as the determination of pH. Tests include ammonia, chlorine, chromium, copper, cyanide, iron, nitrate, phosphate, silica, sulfide, and pH determination. A complete teacher's instruction booklet with background information is also included. Complete for 50 students.

SA08211M \$364.75



Recommended for
**BOTH
WATER &
SOIL!**

Oil Test Paper

This light blue paper turns dark blue in the presence of hydrocarbons, particularly gasoline, fuel oil, lubricating oil, etc. It is recommended for the rapid determination of oil contaminations in water and/or soil. Box of 100.

SB51167M \$67.75

LaMotte Low Range Phosphate Test Strips — Environmental

Phosphorus is a nutrient that acts as a fertilizer for aquatic plants. When nutrient levels are high, excessive plant and algae growth create water quality problems. Phosphorus occurs in natural water in the form of phosphate. Phosphate levels higher than 0.03 ppm contribute to increased plant growth. These test strips provide quick results in the field. This unique test method allows the user to read low range test results visually by looking down into the reacted sample tube. Suitable for use in fresh, brackish, and saltwater samples. Desiccant-lined test strip container protects strips from moisture intrusion. 25 test strips and complete instructions included.

C34426M \$32.45



Water Works Nitrate/Nitrite Water Quality Test Strips

Fast, easy, and reliable water test strips. Each strip measures nitrate nitrogen and nitrite nitrogen. Results obtained in 60 seconds. 25 test strips per bottle.

SB27487M \$33.15



Innovating Science™ GREEN CHEMISTRY

The Production of Biodiesel

In this activity, students will be performing a two-phase process to produce small batches of crude biodiesel.

The crude biodiesel produced is of sufficient quality for use in the demonstration of the burning qualities of both biodiesel and vegetable oil. Included is an optional small-scale exercise where the students will use a washing procedure for the crude biodiesel.

1319M \$89.60



Environmental Test Lab Kit

Five water tests look for dissolved oxygen, hardness, chloride, phosphate, and pH.

The kit also gives you four air tests for suspended particles, smoke density, concentration of chemicals, and carbon dioxide. These tests are easy to do and produce clear, visible results. Many of the tests give or estimate quantitative results.

The kit includes eight test chemicals, test equipment, two charts, and a reproducible laboratory manual. This kit is an excellent introduction to air and water evaluation.

SB42173M \$91.35



Water Test Strips

Test strips provide a quick and easy method of accurate measurements of water quality.

SB42508M



Phosphate Test Strips

The strip may be used for determination of detergent-type phosphates, as well as run off from fertilizer on agricultural lands. The range of this strip is 10-100 ppm in the following intervals: 0, 10, 25, 50, and 100 ppm. 50 strips per package.

SB42508M \$24.75

SB42509M



Iron Test Strips

Detects ferrous and ferric ions. Intervals: 0.0, 3.0, 10.0, 25.0, and 100 ppm. 50 strips per package.

SB42509M \$24.75

Water Hardness Test Strips

This strip may be used in all applications where total water hardness measurements are required, or other specific areas that require low hardness values. Intervals: 0.0, 50, 125, 250, and 500. Grains/Gallon: 0.0, 3.0, 7.0, 15.0, and 30. 50 strips per package.

SB42510M \$24.75

SB42510M



Fluoride Test Strips

The strip may be used for fluoride determination of drinking water. The range of this strip is 10-100 ppm in the following intervals: 0, 10, 25, 50, and 100 ppm. 50 strips per package. **Note:** In order for the strips to work properly, hydrochloric acid solution is needed (not included). For the correct pH, Simply use 1 oz. water to 1 oz. hydrochloric acid.

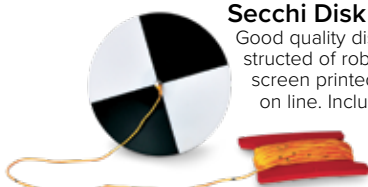
SB42511M \$24.75

SB42511M

Secchi Disk

Good quality disk for water clarity measurement, constructed of robust white plastic. Features permanent screen printed black sectors and black dot every foot on line. Includes attached sinker and rot-proof polymer line on polymer foam bobbin. Line length is approximately 72 ft.

SB52170M \$38.00





Spectrum's Outdoor Exploration Kit

Explore the Environment with Spectrum's Outdoor Exploration Kit. Includes enough materials for 20 - 30 students; 10 sheet magnifiers, 10 bug boxes, 20 magnifiers, Cloud Detective, Insta-Snow, sieves, garden tools, and a hand-held digital microscope all conveniently packaged in a plastic tote. **730684 \$310.92**

Exclusive KIT

Biofuels: Investigating Ethanol Production and Combustion Lab

Lab consists of three investigations. Investigation one is a demonstration of corn and cane sugar (the two food sources used most commonly to produce ethanol) and the fermented stillage to produce fuel. Investigation two involves students investigating the energy released by the combustion of ethanol and kerosene and comparing the results. In investigation three, students measure and compare two by-products of the two fuels: CO₂ and particulate matter. Enough materials for six groups of four or five.

C29169M \$380.15



Waste Management Big Book (3 in 1)

Our combined resource extensively covers all necessary areas of Waste Management for remedial students in grades five to eight. Learn about natural resources, raw materials, pre-consumer waste and post-consumer waste. Prevention, Recycling and Conservation initiatives are explored in a way that makes them easy for students to understand. Empower your students with important information about wastes from natural disasters, oil spills, agriculture, mining, and even space junk. All information and activities are written to grade using simplified language and vocabulary, and are ready-to-use. We have packaged a huge collection of reading passages, comprehension and hands-on activities, and colour mini posters. Also included are crosswords, word searches, quizzes and complete answer keys. All of our content meets the Common Core State Standards and are written to Bloom's Taxonomy. 170 pages.

731338 \$27.30

Waste: At The Source
60 pages
731340 \$13.65

Prevention, Recycling & Conservation
60 pages
731342 \$13.65

Waste: The Global View
60 pages
731344 \$13.65



Biomes Flip Chart Set

Explore these biomes and realize how diverse nature really is. The double-sided, laminated charts are mounted on a sturdy easel. The front side features a colourful, graphic overview of the topic, and the other side serves as a "write-on/wipe-off" activity featuring questions, labeling exercises, vocabulary review, and more. Also includes an activity guide. The 10 charts include Ecosystems and Biomes, Tropical Rainforests, North American Desert, Polar Regions/ Arctic Tundra, Polar Regions/Antarctica, Grasslands/Prairies, Grasslands/African Savanna, Temperate Deciduous Forest, Wetlands/Swamps and Bogs, and Wetlands/Lakes and Ponds. 12" x 18".

731831 \$59.95

Biotic Indicators of Water Quality Display

Great for introducing the EPT index! One indicator of good water quality is the type of organisms that live there. Display shows examples of common water organisms and their sensitivity to water pollution and turbidity. Each specimen is clearly labeled. 12" x 8-3/4".

SB52594M \$120.55



EARTH SCIENCE

OUR ENVIRONMENT

See-Through Compost Container

Students will learn about decomposition, composting, life cycles, and environmental education through this exciting model. Features three separate, aerated compartments, enabling kids to view the entire decomposition process clearly and make side-by-side comparisons between different materials. Includes a 13" W x 5¼" D x 8" H clear plastic box with faux grass top, three clear-view compartments with aeration holes, and thermometers to demonstrate temperature change during the decomposition process. Teacher guide with usage ideas, time lines, and science fair applications also included.

SB47477M \$66.45



Ecological Succession

This game provides an active learning alternative to passive methods of studying ecological succession. Within each successional stage, students react to disturbance events and come to understand how disturbances affect the different communities in a successional series. Includes one game board, six sets of 54 event cards, six sets of four different colour game pieces, 12 community events charts, 28 student worksheets and guides, and one teacher's guide. Designed to accommodate 24 students working in groups of four.

SB51216M \$207.95



Climate Change 3-D Model Making Kit

Learn about climate change in an engaging way with our easy to make model! Models are powerful tools for teaching science because they provide useful simplifications of structures and processes, helping to make the unseen seen and the complex simple. First, students make their model using the colourful parts. Then, use it to look at how the climate has changed due to human activities. The model is a great starting point to consider how climate change will effect us and what we can do to help solve the environmental problems it has caused and will cause in the future. This unique model covers: rising sea levels, sea ice melting, glacial retreat, wildfires, pollution, extreme weather events, habitat loss, deforestation, desertification, ocean acidification, disruption to ecosystems and threats to low level coastlines. The Model Making Kit includes enough materials for students to assemble up to 10 paper models working cooperatively. The comprehensive Teacher Resource Guide included provides illustrated readings, activities, key vocabulary and an assessment, along with teaching opportunities for students to Engage, Explore, Explain, Extend and Evaluate their understanding of the concepts presented.

735476 \$54.95



Land, Water & Air Bulletin Board Charts - Set of 3

This 3 chart set includes a collection of separate posters, each covering a separate, curriculum topic. Uniquely designed, while one side can be posted for student reference, the reverse features dry-erase activities perfect for individual student review or as a learning center activities! Each 12" x 18" Chart is laminated and double-sided – Side 1 features a graphic overview of the topic and Side 2 provides "write-on/wipe-off" activities.

The Land, Water & Air Bulletin Board Chart Set includes the following 3 charts:

- Land, Water and Air
- Seasons
- Weather

735703 \$15.95



Recycling Game

Sort the recycling cards into the correct categories with this fun and educational game. Write the name of the recycling category on the stickers and stick them to the trays. Includes 30 cards to represent 5 recycling categories: glass, metals, paper and cardboard, plastics and non recyclables. Have cards face up, pick a card and then put it into the correct tray. The teacher guide shows the correct tray for each card. Comprehensive 8 page teacher guide explains each recycling area in depth.



SciQuest® Weather Kit Instrument Packs

This SciQuest® Weather Kit Instrument Packs allow your students to work individually in the classroom, or at home, enabling them to collect weather data for extended periods. Each kit is a package of 10.



Barometers
SB22660M Package of 10 \$145.95



Thermometers
SB22662M Package of 10 \$66.55



Weather Vanes
SB22658M Package of 10 \$71.35



Hygrometers
SB22661M Package of 10 \$126.85



Anemometers
SB22659M Package of 10 \$95.15



SciQuest® Weather Mini Kit Instrument Pack
Includes one each of the following weather instruments: weather vane, anemometer, barometer, hygrometer, and thermometer. Comes with instructions.
SB24802M \$62.35



SciQuest® Weather Kit
An inquiry-based, idea-centered, hands-on kit dealing with weather phenomena, along with the measurement and interpretation of weather data. Includes: equipment and materials needed to conduct 70 different investigations/activities, unique equipment specifically designed to permit "hands-on" investigations of ideas traditionally just talked about, durable, space-saving storage chest.
SB22636M \$334.45



EARTH SCIENCE

WEATHER



Tornado Tube & Fountain in a Bottle

Both demonstrations can be done using two empty plastic soda bottles. One connector permits repeated observations of a tornado-like whirl. The second connector shows an artesian well effect, and includes a plastic tube for the water to flow through. Bottles not included.

06425 \$4.50



Today's Weather Board

This 26" x 20" board provides all the tools your class will need to discuss today's date, temperature and weather. Students can use the vinyl cling-on pieces to build sentences, and colourful dinosaurs to describe the weather. Write 'n wipe surfaces are provided for writing in numbers, and graphing weather conditions over the course of a month. Two eyelets for easy hanging. Activity guide included provides ideas for Language, Math, and Science activities.

735598 \$39.50



Climate & Weather

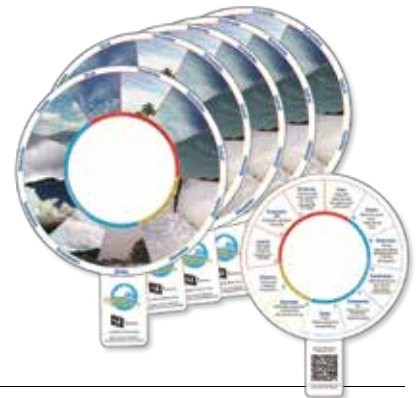
With 23 hands-on experiments, you can investigate specific weather phenomena as well as the climate system in general. Full-colour, 48-page manual.

SB49268M \$56.95

Cloud Detective

Handy tool helps students identify the different clouds in the sky. Simply hold the Cloud Detective so the cloud can be seen through the observation hole in the middle, then try to match the cloud to the images along the outside of the tool to identify the cloud. The opposite side contains additional information related to colour, shape, and current weather to ensure correct identification. Pkg. of 5.

730674 \$18.90



Weather & Climate Bulletin Board Chart Set

Each 12" x 18" Chart is laminated and double-sided - Side 1 features a graphic overview of the topic and Side 2 provides "write-on/wipe-off" activities.

The following charts includes:

- Earth's Atmosphere
- Understanding Weather
- Weather & Climate

731803 \$19.95

Insta-Snow®

An amazing, super absorbent powder that turns water into a fluffy substance that looks like real snow! Powder expands 100 times. Fluffs up like authentic snow. Activity guide and measuring scoop included. Safe and non-hazardous.

Insta-Snow® Big Bag. Makes approximately eight gallons of snow!

77783 \$44.95

Insta-Snow® Jar. Makes two gallons of snow. 40 total scoops in each jar.

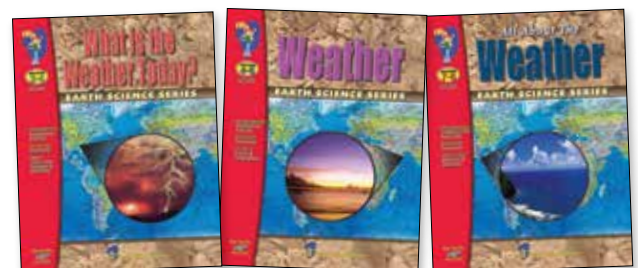
77782 \$17.50



Laminated Cloud Charts with Weather Forecast

Knowing what weather to expect can be vital to your safety! If you need a quick, accurate way to forecast weather, this laminated, waterproof cloud chart is an invaluable tool. It's used by the U.S. Coast Guard and the FAA. The 11" x 15" chart contains full-colour photographs with descriptive captions.

SB40703M \$26.55



Earth Science Series

Earth Science Series focuses on temperature, wind, storms, air pressure, moisture, water and weather. Cross-curricular activities build on scientific principles to help students develop scientific awareness and appreciation.

What is the Weather Today?
54 pages.

733652 \$19.65

Weather
102 pages, 50 activities.
77810 \$19.65

All About the Weather
69 pages, 45 activities.
733660 \$19.65



Pocket Sling Psychrometer

A self-contained sling pocket case and slide rule sling psychrometer made of high-impact plastic. Designed for portability; measures $\frac{5}{8}$ " x $1\frac{1}{8}$ " x $6\frac{7}{8}$ ". Sharp white-on-black scale markings. Red spirit filling. Range: 20° F to 120° F. SB27109M \$48.70

Magnetic Thermometer Recording Charts

Magnetic write on/wipe off charts for recording temperature and weather. Pack of 5 charts, 18" x 3.75" with teacher instructions and reproducible worksheet. 730727 \$20.25

Weather Proof Rain Gauge

Track rain accumulation with this weatherproof rain gauge. Total length measures 21.6 cm. 733534 \$13.55

Weather Wooden Dice - Set of 6

Learn about seasons, months, and the weather with this set of 6 interactive dice. Roll a weather dice (purple) and have children pick a temperature dice (green) or a season dice (blue) that matches the weather. Use the month dice (red) with the weather dice to talk about proper clothing and activities for each season. Solid wood dice 1.5" (4 cm) with rounded corners. 735601 \$10.55

Weather Dice Stickers - 72 Pieces

Replacement stickers. 72 pieces. Each sticker measures 1.25" (33 mm). 735600 \$2.60

Sling Psychrometer Kit

Use this simple apparatus to measure relative humidity. Includes two plastic-backed Celsius thermometers: one for dry bulb measurements and one for wet bulb measurements. Thermometers are mounted on a wooden handle so they can be spun to obtain temperature readings. Includes activity guide with relative humidity calculation table. Some assembly required. SB51739M \$9.85

Set of 15. SB51740M \$132.00



Weather Centre

Learn about the weather by using the instruments together or separately. Includes a Barometer, Hygrometer, and Thermometer in a carrying case, activity guide and 3 stands for individual instrument use. Instruments can be removed and used separately in a small



Hygrometer

Mounts horizontally or vertically. Colour coded temp/humidity indicators. Indoor Temperature and RH%. 733624 \$15.80

Seasons Game

Learn about the four seasons with this fun photograph game. With both sides of the board, 2 different games are included in this set. Start on one side for a fun seasons matching game, then flip over and play a game of seasons bingo. Teachers can photocopy the writing frames for children to draw images and write notes about the things that relate to the current season making this an all year resource. 735688 \$39.90



The Seasons Learning Center

Designed for either teacher-directed instruction or independent use by groups of up to 4 students, the Learning Center covers the Seasons.

- Includes:
 - Four Visual Learning Guides – all focused on this key topic – for direct instruction through an easy-to-follow topic overview; "write-on/wipe-off" activities; and guiding, assessment review questions.
 - One Curriculum Mastery Game for small group review, featuring one set of 30 illustrated, self-checking question cards; a laminated game-board; materials for four players; and student instructions.

735695 \$36.85

All About Weather Bulletin Board Charts - Set of 5

Uniquely designed, while one side can be posted for student reference, the reverse features dry-erase activities perfect for individual student review or as a learning center activities! Graphic images and hands-on activities combine to provide comprehensive coverage of essential student skills. Each 12" x 18" Chart is laminated and double-sided – Side 1 features a graphic overview of the topic and Side 2 provides "write-on/wipe-off" activities. Includes the following 5 charts:

- Exploring Weather
- Weather Tools
- Look at Clouds
- The Seasons
- Calendar

735696 \$29.95



Wall-Mounting Hygrometer

This instrument can be wall mounted inside or outside for easy readings when determining air humidity. It reads humidity from 10% to 90%, as well as temperature from -20°C to 40°C. 735077 \$12.60



EARTH SCIENCE

WEATHER

Weather Ball Barometer

Indicates changes in air pressure quickly and accurately. The ball is filled with coloured distilled water. Once filled the air trapped inside the ball is no longer subject to variations in atmospheric pressure. The liquid in the indicator tube, however, remains open to the atmosphere and is directly affected by atmospheric pressure. When atmospheric pressure rises, the liquid in the indicator tube is pushed down and an improvement in the weather can be anticipated. When air pressure falls, the greater pressure inside the ball causes the liquid in the indicator tube to rise, indicating that a deterioration in weather can be expected. Kit includes 1 weather ball barometer. 7½" H x 4" dia.

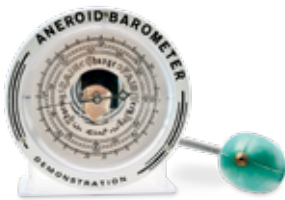
732550 \$62.25



Aneroid Barometer

The perfect barometer for giving demonstrations. Features a protective transparent case, air-tight seal, and a pressure bulb to force movements for teaching purposes.

SB48285M \$35.35



Cloud-Forming Apparatus

Teach cloud formation when there's not a cloud in the sky! This apparatus duplicates atmospheric conditions during cloud formation. It consists of a special glass flask with a rubber hose connection, pinch clamp, and large, thick walled, rubber bulb. When the atmospheric pressure is lowered, smoke particles are introduced into the chamber and a nucleus for the formation of water droplets is produced. By compressing and suddenly releasing the bulb, a dense cloud forms in the flask.. Complete instructions included.

732544 \$23.15



Acurite® Galileo Thermometer & Barometer

Measure temperature and atmospheric pressure just like Galileo Galilei! Temperature is determined by the lowest floating bulb. Glass thermometer can measure temperatures ranging from 64° F to 80° F. Atmospheric pressure can be determined by the level of liquid in the barometer. A low level of liquid in the globe indicates high pressure and fair weather, whereas a high level of liquid predicts bad weather is on the way. Frosted world map is imprinted on the glass barometer globe. Thermometer and barometer come together on a wooden base. 9" H x 4½" W x ¾" D.

SB48147M \$53.95



SciQuest® Thermometer Wizardry

Have your class explore the science of temperature measurement by building three different types of working thermometers using this lab kit. Allows student groups to each build a Galileo-type thermometer with floating spheres, a vapor pressure thermometer (as found in indoor/outdoor home thermometers), and a liquid expansion, tube-like thermometer. Also includes a fourth experiment that builds the classic Cartesian diver to demonstrate liquid pressure. Kit contains all supplies needed with complete lab instructions.

SB35402M \$134.45



Dial Barometer

Large clear, dual scale in hPa (hecto Pascal), and mm hg on a 4" dia. dial which is easy to read from a distance. Accuracy of ±3 to 4 hPa. Excellent for classroom or lab use. Wall mount.

SB23610M \$53.00



Thermometer with Relative Humidity

An attractive, jumbo-dial thermometer, easy to read at a distance. 12" diameter. Features Fahrenheit, Celsius, and relative humidity scales. Durable; hang indoors or out. Plastic-covered face.

SB01068M \$46.45



Earth's Atmosphere Flip Chart Set

Set includes: Our Atmosphere, Layers of the Atmosphere, Clouds, Precipitation, Weather & Weather Patterns (Air Masses & Fronts), Severe Weather, Predicting Weather and Vocabulary Review. 10 double-sided, laminated charts, each 12" x 18".

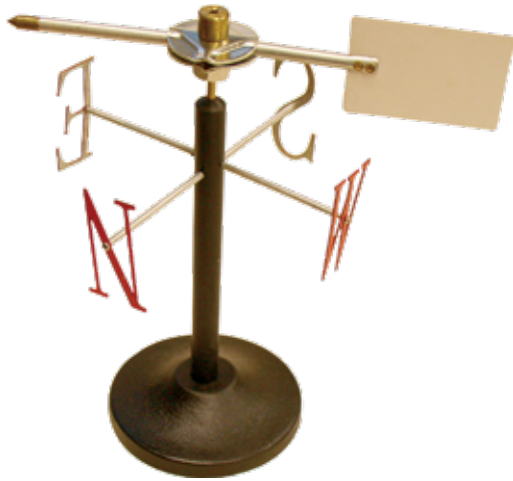
731848 \$59.95

Earth's Climate Flip Chart Set

Set includes: Climate & Its Causes, Seasons, Climate Zones & Biomes, The Tropical Zone, The Temperate Zone, The Polar Zone, Climate Change, Global Warming, Ozone Depletion and Vocabulary Review. 10 double-sided, laminated charts, each 12" x 18".

731849 \$59.95





Wind Vane

This weather vane provides an easy way to determine wind direction for weather studies. The heavy-cast base and sturdy post support a sensitive cone bearing assembly that responds to the slightest wind. Place the "N" in the northern position and read off the direction shown by the pointer. Large red letters identify directions. Measures 6" W x 6" L x 8" H.

732548 \$45.45



Digital Anemometer

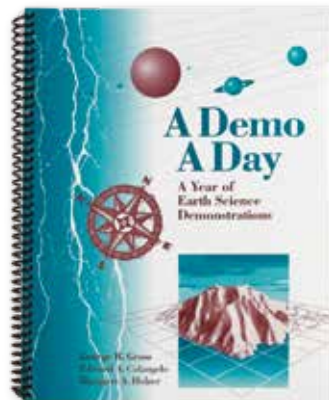
Small and light enough to wear around your neck. Clearly displays wind speed and temperature. Measuring units in mph, ft/min, Km/h, m/s, and knots. Measure wind from 0-30 m/s with an accuracy of +/- 5%, and temperature from -10° C to 45° C with an accuracy of +/- 2° C. Features a backlight display and an automatic power off. 3V battery operation. Measures 6" x 7" x 2".

SB49203M \$82.95

Demo A Day™ - Earth Science

Use to assist in organizing and enhancing your daily lessons! Demonstrations may be used to introduce a topic, to illustrate a point during a lesson, to summarize a lesson, or to review a particular concept. Written with the belief that children will see the lesson demonstrated and remember it. Topics include: Scientific Method, Making a Compass, Longitude and Latitude, Time Zones, Eclipses, Craters, Zero Gravity, Crystals, Magma, Eruption, Tsunami, What's Sand?, Water Supply, and much more! 205 pages, spiral bound.

SB43859M \$73.00



Anemometer

Get a direct reading of wind speed without the need to count revolutions with this uniquely designed, handheld or permanently fixed anemometer. As the wind blows harder, the arms move, lifting the reading bar.

SB25130M \$49.95



Anemometer

Demonstrates the operating principle of cup anemometers. An electric fan may be used to show speed changes with air velocity changes. This extra-sensitive, high-quality model responds to wind velocities of 2 mph.

SB16581M \$20.85



NewPath Learning® Earth Science Curriculum Mastery® Flip Chart Set

The set features 10 double-sided, laminated charts, each 12" x 18" and spiral bound on a durable, free-standing easel. Side 1 of each chart features a graphic overview of topic while Side 2 serves as "write-on/wipe-off" activity chart. Also includes Activity Guide featuring copy-masters and exercises.

**Earth Science Flip Chart Set
731846 \$59.95**

**Volcanoes Flip Chart Set
731850 \$59.95**

**Earth's Surface Flip Chart Set
731851 \$59.95**

**Earthquakes Flip Chart Set
731852 \$59.95**

**Plate Tectonics Flip Chart Set
731853 \$59.95**



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INFORMATION**



EARTH SCIENCE

DYNAMIC EARTH



Erupting Volcano Model

There's nothing like an erupting volcano to get kids excited about earth science! This large plastic model makes volcano demonstrations easy and mess-free. One half of the detailed cross-section shows the inside, the other has corresponding labels. Includes easy to make lava recipe and 33cm clear plastic tray and removable tube for quick clean up. 28 x 33cm. Includes Teacher's Guide.

79746 \$79.70

Landform Demonstration Kit

Students at all levels can visualize the causes and forces that shape the Earth's surface. Over 20 activities and projects demonstrate volcanic action, faulting, and folding. Consists of a demonstration tray, three pieces of flexible foam, three simulated rock structures, erupting volcano, and miscellaneous project materials. Comprehensive study guide includes stimulating activities.

56814 \$94.15



Erupting Volcano Classroom Pack

This four-session project makes any classroom explode with total student involvement! Create fun, interactive volcanoes that actually erupt, sending student knowledge and retention skyrocketing. Includes enough materials for 12 individual or group projects: project bases with labels, dark green underbrush, medium green coarse accent, two-part eruption mixture, volcano tubes, rock and black colours, Earth undercoat, plaster cloth rolls, cardboard pads, foam brushes, plastic cups, sifter lids, project glue, and teacher and student guides.

SB45529M \$160.85



Earth's Surface Bulletin Board Chart Set

The Earth's Surface Bulletin Board Chart Set includes the following 3 charts:

- Landforms, Rocks & Soil
- Weathering of Rocks & Soil Formation
- Volcanoes

Each 12" x 18" Chart is laminated and double-sided.

731802 \$19.95

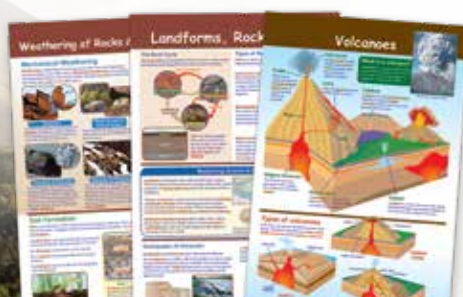
Dynamic Earth Bulletin Board Chart Set

The Dynamic Earth Bulletin Board Chart Set includes the following charts:

- Earthquakes
- Plate Tectonics
- Changes on Earth

Each 12" x 18" Chart is laminated and double-sided.

731804 \$19.95

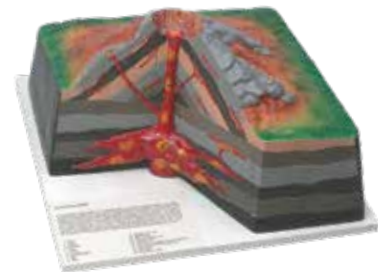
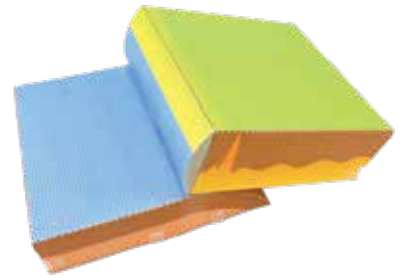


Tectonics Plates 3-D Model Making Kit

Show how tectonic plates shape the world with our interactive model!

Models are powerful tools for teaching science because they provide useful simplifications of structures and processes, helping to make the unseen seen and the complex simple. Your students first make their model tectonic plates using the colorful parts and then use them to look at their structure and how tectonic plates interact at their margins. These interactions form mountains, deep ocean trenches, islands, volcanoes and cause earthquakes! The model can also be used to look at the following interactions: oceanic meeting oceanic plate, oceanic meeting continental plate, continental meeting continental plate, conservative plate margins and mid-ocean ridges. The Model Making Kit includes enough materials for students to assemble up to 10 paper models working cooperatively. The comprehensive Teacher Resource Guide included provides illustrated readings, activities, key vocabulary and an assessment, along with teaching opportunities for students to Engage, Explore, Explain, Extend and Evaluate their understanding of the concepts presented.

735479 \$54.95



Volcano Model

Beautifully detailed strato volcano and composite volcano model. Illustrates the various crusts, lava tube, volcano formation, and step sided formation of cone shape. Measures 16½" L x 16½" W x 8" H.

SB40678M \$229.85

Seismograph Model - Hubbard

Demonstrates how earthquakes are measured and calculated for intensity. This small tabletop unit will captivate your students as they try to top the Richter Scale. This kit comes complete with a detailed Teacher's Guide.

731316 \$50.75



High School Earth Science Curriculum Mastery® Games

Provides a hands-on, comprehensive review of 25 key earth science topics that conform to NSE Standards. Students can play and learn independently, in small groups, or as a class for periods from 10-30 minutes or more. Features easy-to-follow, universal instructions, and minimal setup. Includes 25 sets of 30 self-correcting review cards (750 questions total); 12 double-sided, laminated game boards; comprehensive teacher guide, classroom presentation CD, and a free 90-day online subscription.

731031 \$34.00



Stream Table Kit

Sturdy plastic tray is large enough for group study or individual investigations. A special trough can be used for relating the rate of erosion to slope and stream volume. Includes a 48" x 14" x 3" heavy plastic tray with drain; outlet assembly; 36" x 2" inlet and outlet hoses; trough; support to raise tray or trough; and a 72" x 1/4" siphon tube with clamp.

67798 \$108.30

Set of 4 Kits.

SB16231M \$399.00



Lab-Aids® Modeling Stream Erosion and Deposition

Students will use a mini stream table to investigate the dynamics of stream erosion and deposition. Using specially engineered materials, students create, observe, describe, and interpret the erosional and depositional patterns created when "rainwater" flows over an area. Some of the features commonly formed include canyons, braided streams, and deltas. Designed for 24-30 students working in groups of four or five.

SB44075M \$301.45



Extend-A-Lab. Provides extra materials to accommodate more students for the lab above.

SB44076M \$66.55

Structure of the Earth 3-D Model Making Kit

The structure of the Earth is easy to understand with our unique easy to make model. Models are powerful tools for teaching science because they provide useful simplifications of structures and processes, helping to make the unseen seen and the complex simple. First, your students build their model of the Earth out of the colourful parts. Next they use their model to look at the Earth's structure. Students can also use the model to look at how the Earth's interior can be divided by both chemical composition and physical properties. The model covers: oceanic crust, continental crust, upper mantle, lower mantle, lithosphere, asthenosphere, outer core and inner core. Understanding the interior of our planet provides a great starting point for studying Earth Science! The Model Making Kit includes enough materials for students to assemble up to 10 paper models working cooperatively. The comprehensive Teacher Resource Guide included provides illustrated readings, activities, key vocabulary and an assessment, along with teaching opportunities for students to Engage, Explore, Explain, Extend and Evaluate their understanding of the concepts presented.

735478 \$44.95



Cross-Section Earth Model

Bring the deep layers of Earth to the light with this unique 5" foam model. The outside surface illustrates continents and oceans with raised features. Once the model is separated, students discover facts of the Earth's core. Each brightly coloured hemisphere shows layers, temperatures, and depths. Includes: activity and fact guide.

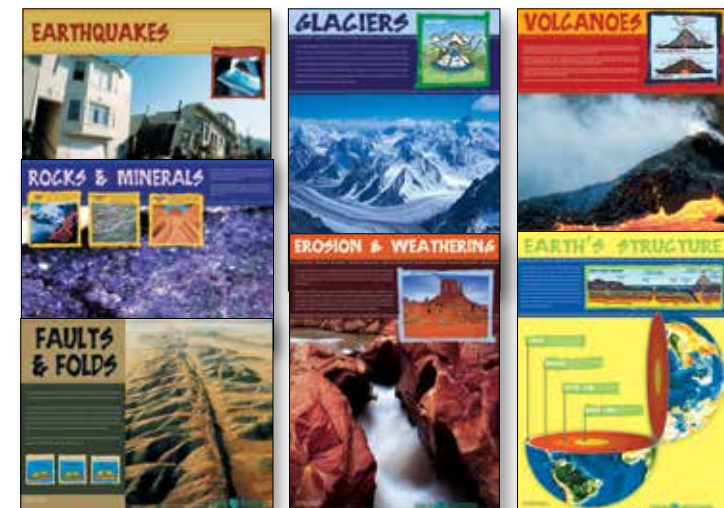
732468 \$39.00



Groundwater Table

An excellent tool for any earth science or environmental science teacher, this transparent plastic tray can be used on an overhead projector or on a tabletop. Use the included pump to move coloured dye throughout the model to demonstrate groundwater concepts such as aquifers, sinkholes, caverns, geysers, and hot springs. Includes self-contained groundwater table, water pump (120V AC), tubing, eyedropper, and teacher's guide. Minor assembly required.

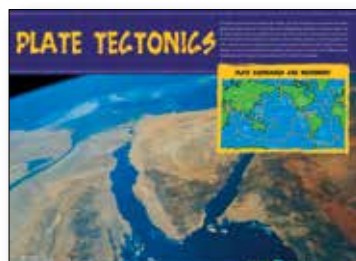
SB46712M \$247.15



Earth Processes Poster Series

Dynamic photos and colourful diagrams introduce students to the fascinating processes that shape the Earth's surface. Eight poster set includes one each of volcanoes, glaciers, erosion and weather, Earth's structure, earthquakes, plate tectonics, rocks and minerals, and faults and folds. 18" x 24". Laminated.

SB16231M \$399.00



EARTH SCIENCE

SOIL



LAB-AIDS® Decomposition Kit

They use an "inquiry method" to set up a series of experiments which focus on determining the rate of decomposition, the effect of soil type on decomposition, and the different types of substances that decompose. Kit contains 24 plastic flower pots, 24 clear cover dishes, two trays, dried plant material, gravel, processed foodstuff, animal material, clean sharp sand, natural fibers, plastic fragments, soil rich organic matter, synthetic fibers, 50 worksheets and guides, and instructor's guide. Complete for 50 people or 24 groups.

SB28793M \$209.55



C25448M

Soil Test Kits

Contains liquid reagents and equipment for the given number of tests. Also includes tests for soil pH, nitrogen, phosphorous, and potash.

Soil test Kit with 80 Tests. 20 tests each for soil pH, nitrogen, phosphorous, and potash.

C25446M \$44.75

Soil test Kit with 200 Tests. 50 tests each for soil pH, nitrogen, phosphorous, and potash.

C25448M \$201.15



Combination pH, Nitrate, Phosphorus, Potassium Outfit

It uses a reagent system that eliminates the need for filtering the soil extract. Measurements are made in graduated plastic test tubes. The test result readings are measured against Mylar® laminated colour charts. Enough reagents are furnished for 30 pH tests, 15 nitrogen tests, 20 phosphorous tests, and 15 potassium tests. Two booklets, A Study of Soil Science and the LaMotte Soil Handbook, provide information and data for interpretation of test results. Polypropylene carrying case.

C08704M \$100.75

Sedimentator Kit

The Sedimentator is a tube with different types of sediments for students to use for observing movement, deposition, and layering of sediments and organic materials. These observations apply to sedimentary rock formation and fossil formation. Each kit comes with a 12-page student guide that has activities for students to work on in groups or to use at a learning station in the classroom; and a teacher's guide including student worksheets and answer key.

SB27466M \$33.15

Sedimentator Tube Only.

SB27465M \$27.15



Soil NPK Test Kit

Each kit comes with the necessary apparatus, simple diagrammed instructions, and a laminated color chart. The NPK Soil Test Kit was specifically designed to meet the needs of the GLOBE Program™ (Global Learning and Observations to Benefit the Environment). This soil test kit is fun to use.

SB42195M \$53.95



Soil Horizons

From the organic layer of humus that creates fertile topsoil, all the way down to the bedrock, each layer of soil is clearly presented and defined (organic, topsoil, eluviation, subsoil, regolith, bedrock). This display is topped off with a stem of grass showing the roots feeding into the upper layers, as well as a mushroom with its mycelium extending into the topsoil. 16" x 12" exhibit.

C34457M \$252.15

Soil Classes

The separates alone are only the beginning of soil textural study, since they are not found pure in nature but are always mixed. It is the natural mixture found in the field and known as soil classes — sands, loams, and clays — that are important. Set of 8 glass jars on block base. Includes sand, sandy loam, clay loam, peat loam, silt loam, clay, and muck.

LS00519M \$49.55



Soil Test Kit

Give soil and ponds a checkup with simple tests that detect levels of common chemicals. Includes: comparator box and test capsule for 3-step tests that measure pH, nitrogen, phosphorous, and potassium.

C14572M \$27.85

Refill Pack for Soil Test Kit. Includes 10 capsules for each test (pH, nitrogen, potash, and phosphorus).

C34288M \$14.25

Soil Classes

All of the eight basic soil types (sandy loam, loam soil, clay soil, silt loam, muck soil, peat soil, clay loam, and sandy soil) contained in plastic "kid safety tubes" with safety tube holders included. Learn to identify the characteristics of the basic soil classes, sands, loam, and clays.



Screen Sieve Kits

Great kits to separate and grade soil and rock samples in order to determine the make-up of soil strata. The soil sample is placed in the top container and agitated through the various size sieves. Each set of 6" dia., high-impact plastic sieves includes a bottom pan and lid.

Six-Sieve Kit. Includes six screen mesh sizes: 5, 10, 35, 60, 120, and 230. Includes teacher's guide. **SB26141M \$99.90**

Four-Sieve Kit. Includes four screen mesh sizes: 5, 10, 60, and 230. **SB01705M \$69.65**



Deluxe Soil Probe

Simplify your sampling procedures with this heavy-duty soil probe with an easy-to-use foot stand for penetrating hard-to-dig soils. The hand plunger lets you eject a soil sample from the heavy tube easily and cleanly. This 36" long tool takes a full 10" core sample, 1" in diameter. This durable instrument is made of heavy-gauge steel, nickel-plated for long life.

C09414M \$213.95

Kelway Soil Acidity and Moisture Meter

Test soil in 3 minutes! This tester is designed so that by the action of the electricity it generates it will give an accurate pH reading of the soil on the outside scale of the dial, and will show moisture content of the soil on the inner scale. The electrical energy to move the indicator is due to a potential difference between two electrodes which act to show pH value. These electrodes are constructed of special metal plates and alloys which activate each other and in turn set up an intricate electrical process generating energy that activates the indicator. Has no batteries to run down or replace. Easy to use, just push tester vertically into soil to a depth of at least covering the metal plates. Read the pH on the upper scale (3.5, 4, 5, 6, 7, 8 pH values). Once pH reading is taken, push moisture button on side to obtain the moisture reading (0, 50, 70, 100% moisture). Only 6½" long, weighs 8 oz. Carrying case with belt loop; complete instructions. Six-month guarantee, fully serviceable.

C09002M \$207.95



How Soils Are Formed Collection

This collection contains rocks and minerals that break down to become the major components for soils. Samples of the actual soils demonstrating texture and composition as end products are included. Contains 15 number-coded specimens in a compartmented container. Each compartment is 1-1/2" x 1-1/2". Soils are packaged in plastic bags.

C30192M \$48.95



4-Way Analyzer

The Four-Way Analyzer measures the most important aspects of plant health: light, soil, moisture, soil pH, and soil fertility. The light reading determines the light level where the plant is located. The moisture portion reads the moisture level where it counts, at root level. Soil pH is measured on a scale of 0-9, and a combined nitrogen-phosphorous-potash reading is determined on a "too little," "ideal," and "too much" scale.

C25384M \$52.35



Soil Thermometer

This spirit-filled soil probe thermometer is suitable for measuring the temperature of soil and compost, ideal for the horticulturist or keen gardener. Measures temperature over the range of 0°C to 80°C in 1°C increments. The soil thermometer is housed in a strong plastic case with a pointed tip. 12" length.

735074 \$6.90



Contamination of Carter Creek Environmental Forensics Kit

This kit teaches chemistry and its relevance to the community by using a clever story line that will interest students. Includes 10 plastic slides, 15 toothpicks (stirrers), two crayons, eight water samples in 3 ml dropper bottles, eight soil samples in 3 ml screwcap tubes, five testing solutions (universal indicator, D Test, Polycrit, LeadStat, and MercuTest). Contains no phthalates, mercury, or lead products or samples. For 24 students working in pairs.

SB50011M \$116.15



Elementary Soil Classroom Kit

A comprehensive introduction to soil! Students will gain a thorough understanding of soil formation, soil composition, and soil chemistry, as well as how soil factors into plant growth and ecosystems. They will test the pH and NPK levels of soil samples, differentiate one soil sample from another, and grow plants in various soils to determine which is best for growing plants. Includes soil test kit with test tabs, five bags of sandy and clay soil (1/2-cup each), two bags of sandy loam, silt loam, clay loam, and peat soil (1/2-cup each), three bags of gravel and humus (1/2-cup each), 30 test tubes, 40 slides, pH paper (0-13 range), six hand magnifiers, 10 disposable containers (approx. 50 ml or 1.75 oz.), 24 plastic pipettes (4.5 ml), radish seeds, marigold seeds, and teacher's guide with reproducible student pages. Tote colour may vary. No choice.

SB48134M \$285.55



EARTH SCIENCE

FOSSILS



Life on Earth - A Fossil History Model

Designed to help students understand how life has changed over vast periods of geologic time. The colourful 3-D model allows students to correlate 21 replica "fossils" to realistic-looking rock layers. Illustrations and "fossils" include both marine and terrestrial life forms from the Pre-Cambrian through the present. Eons, eras, periods, epochs, and years are clearly shown on the chart. The teacher's guide includes classroom activities, pre/post tests, reference materials, and glossary. Durable vinyl model measures 23½" x 24½".

SB48459M \$208.00

Examining Fossils

Kit provides students with the opportunity to handle and examine eight different fossils from various localities and geological ages. Students experience first-hand the power and limitations of using fossils as evidence of past life and as one of the bases for determining evolutionary relationships. The geological time scale is also introduced to understand the history and evolution of life on earth. Reusable. For up to 32 students. One year warranty.

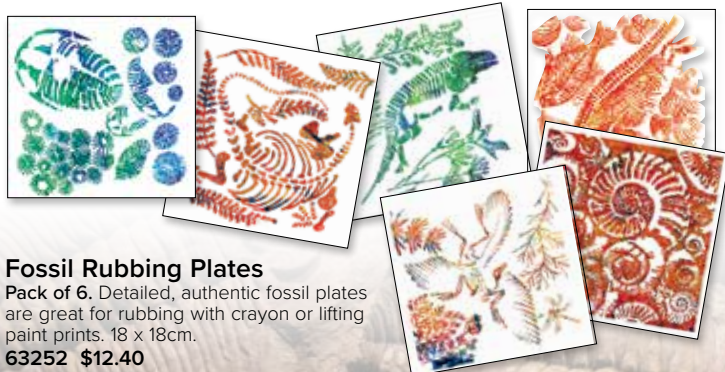
SB40670M \$248.25



Fossil Starter Bag

Contains 15 individually bagged and labeled fossil specimens commonly used in classrooms to illustrate major life forms through history. Teacher's insert describes each fossil. Also includes full-colour geologic time student chart.

SB48142M \$25.00



Fossil Rubbing Plates

Pack of 6. Detailed, authentic fossil plates are great for rubbing with crayon or lifting paint prints. 18 x 18cm.

63252 \$12.40



Fossils Paper Casting Classroom Kit

Now, using this kit, they can create their own inexpensive paper casts of 12 different fossils, decorate them with markers, and then use the reference guide to determine which animal the fossil represents and learn interesting facts about it. Kit includes: six molds to mold a total of 12 different fossils, three spray bottles, 18 washable tempera paint markers (three each of six colours), three Eyewitness Fossil books, and activity guide.

732530 \$282.45

Fossil Molds

Fossils include: a fish; a gastropod (stomach-foot); a cephalopod (head-foot); a pectopteris (seed-fern), annularia (scouring-rush), neuropteris (seed-fern with bladelike leaf), and a lepidodendron (scale-tree); a crinoid (lily-form), brachiopod (arm-foot), and bryozoa (moss-animal); a horn coral; and a trilobite (three-lobed) all from millions of years ago. Set includes six soft, flexible molds, 4 lbs. casting plaster, and complete molding instructions.

732526 \$86.35



Fossil Collection

Fascinate your students with the study of fossils. Comes with 21 plastic reproduction fossils that students will measure, identify, and classify according to their geologic era. Includes: Teacher's Guide.

732532 \$29.50



Advanced Fossil Collection

This expanded collection includes demonstration specimens of animal phyla and plants. Contains 30 number-coded, natural specimens in a compartmentalized container.

SB10963M \$69.65

General Fossil Collection

Examples of vertebrate and invertebrate fossils from the Paleozoic, Mesozoic, and Cenozoic eras are included. Contains 15 number-coded, natural specimens in a compartmentalized container.

SB10961M \$47.75

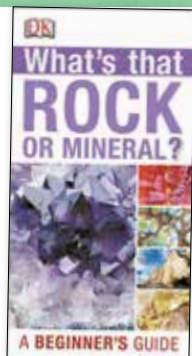


What's that Rock or Mineral?:

A Beginner's Guide

Compact and portable, What's That Rock, Mineral or Gem? is an indispensable beginner's pocket guide to identifying the 150 most common North American rocks and minerals. 128 Pages.

735103 \$14.95



Basic Rock Collection

This Collection is a great introduction to Igneous, Sedimentary and Metamorphic rocks. The 5½" x 4¼" full colour cardstock holds 18 - ½" to ¾" specimen that explain the difference in these three types of rocks. Packaged in a resealable zipper closure bag.

733034 \$19.95



Classifying Sedimentary, Igneous, and Metamorphic Rocks

Students learn that certain natural resources are often found in association with certain rocks. A reading on the formation of igneous, sedimentary, and metamorphic rocks supplements student observations as they examine, describe, and group rock samples. Rocks samples in kit are 1" x 2" x 1" or larger and clearly show characteristics of each rock type. Includes step-by-step student worksheets. Materials for 32 students.

SB40664M \$206.35



SB10942M

Basic Rock Collection

This is a basic study and reference collection, containing five igneous rocks, five metamorphic rocks, and five sedimentary rocks. Specimens include obsidian, granite, basalt, scoria, rhyolite, sandstone, limestone, shale, travertine, conglomerate, slate, marble, quartzite, gneiss, and amphibolite. These are all typical of the rock group in which they fall, and are basic representatives of the group. Complete set of 15 numbered 1½" specimens in a compartmentalized container.

SB10942M \$44.55

Rock Study Kit. Includes: five each of igneous, sedimentary, and metamorphic rocks, activity guide, and magnifying glass.

SB39180M \$39.00



SB48163M

SB37929M

Mineral Study & Test Kits

An excellent introduction to minerals. Students will learn to identify 15 common minerals by observing and testing their physical properties.

Study Kit. Includes activity guide, magnifying glass, streak plate, and nail.

SB37929M \$37.45

Test Kit. Includes streak plate, glass plate, hand lens, dropper bottle, magnet, nail, penny, and hardness scale. Comes in a zip-lock pouch.

SB48163M \$16.65



SB10943M

SB10945M

SB10944M

Igneous Rocks Collection

Representative specimens of intrusive and extrusive igneous rocks are included in this set. These materials provide a basis for understanding geologic processes such as volcanic activity at work in the earth. Contains 15 numbered 1½" natural specimens in a compartmentalized container.

SB10943M \$36.45

Metamorphic Rocks Collection

In geologic processes usually associated with pressure and heat, igneous, sedimentary, and other metamorphic rocks may be reformed to become new metamorphic rocks. These important processes are better understood through study of representative metamorphic rocks. Contains 15 numbered 1½" natural specimens in a compartmentalized container.

SB10944M \$36.45

Sedimentary Rocks Collection

The erosion and degradation processes which are at work on all materials exposed on the earth's surface produce sediments which become reconsolidated through compaction and precipitation. Representative sedimentary end products compose this study unit. Contains 15 numbered 1½" natural specimens in a compartmentalized container.

SB10945M \$36.45



EARTH SCIENCE

ROCKS & MINERALS



Hardness Scale with Test Kit

Includes first nine minerals used in Mohs' scale, plus a streak plate, glass plate, and nail. Packed in a sturdy, polystyrene tray with lid. Includes identification key.
SA02792M \$26.25



Luster Collection

Recognition of the kind and degree of luster of some minerals is an aid to identification. This collection provides examples of both metallic and nonmetallic types of luster. Contains 15 numbered 1/2" natural specimens in a compartmentalized container.
SB46086M \$46.45



Rock Collection

The three basic rock types, all separately packaged in a solid storage box. Easy to use and easy to store. The price is right. Includes sedimentary, metamorphic, and igneous rocks.
SB47390M \$32.85

Classroom Collection of Rocks and Minerals

This collection provides materials for a basic study in mineralogy with specific study units essential to understanding general geology with these study groups: rock-forming minerals; igneous, sedimentary, and metamorphic rocks; ores of common metals; gemstones; and minerals in the scale of hardness. Contains 50 numbered 1" natural specimens, compartmentalized container, and Rocks and Minerals Study Guide.
SB46077M \$100.75



Explore With Me Rock & Mineral Sets

Each collection includes a set of 10 specimens and a rock identification chart, complete with images and a brief description. A perfect starter set for the young budding geologist!



Sedimentary Rocks

- Bituminous Coal
- Limestone
- Shale
- Fossil Limestone
- Banded Sandstone
- Gypsum
- Chalk
- Oil Shale
- Sandstone
- Conglomerate

77652 \$17.40



Minerals

- Calcite
- Quartz
- Pyrite
- Fluorite
- Epidote
- Malachite
- Feldspar
- Magnetite
- Talc/Soapstone
- Olivine

77656 \$17.40

Igneous Rocks

- Pumice
- Obsidian
- Granite (sodium)
- Syenite
- Pegmatite
- Scoria
- Rhyolite
- Granite (potassium)
- Diorite
- Porphyry

77654 \$17.40



Explore With Me - Rocks & Minerals

Part of the EXPLORE WITH ME GEOLOGY series, the Rocks & Minerals Collection includes a set of 24 specimens (6 of each Metamorphic, Sedimentary, Igneous, and Minerals) enclosed in a handy, plastic storage container. A rock identification chart, complete with images,

is included to help kids categorize their collection. A perfect starter set for the young budding geologist!
77655 \$24.40



Metamorphic Rocks

- Anthracite Coal
- Gneiss
- Phyllite
- Amphibolite
- Mica Schist
- Quartzite
- Marble
- Slate
- Talc Schist
- Garnet Schist

77653 \$17.40

Minerals

- Quartz
- Feldspar
- Talc
- Olivine
- Pyrite
- Calcite

Metamorphic

- Slate
- Gneiss
- Anthracite
- Quartzite
- Marble
- Schist

Sedimentary

- Conglomerate
- Sandstone
- Shale
- Gypsum
- Limestone
- Dolomite

Igneous

- Granite
- Rhyolite
- Basalt
- Pumice
- Obsidian
- Gabbro





Rocks, Minerals and Fossils Bulletin Board Chart Set

Each 12" x 18" Chart is laminated and double-sided - Side 1 features a graphic overview of the topic and Side 2 provides "write-on/wipe-off" activities. Includes the following 4 charts:

- Geologic Time Scale
- Minerals
- Rocks
- Fossils

731801 \$29.95

Rocks Poster

An illustrated look at metamorphic, sedimentary and igneous rocks as well as how they formed. Poster is 23" x 35" and is laminated.

731047 \$29.95

Minerals Poster

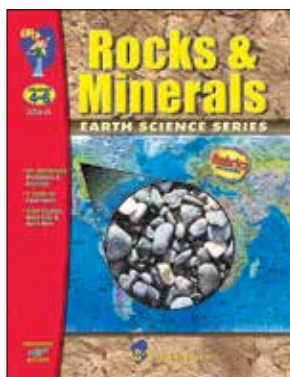
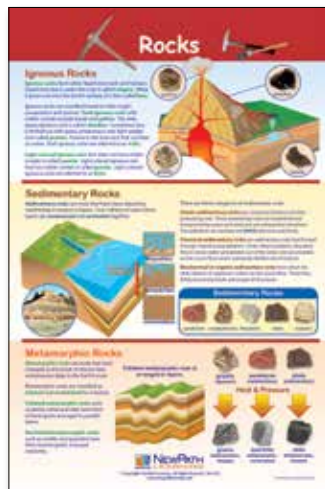
What is a Mineral? How do they form? How can they be identified? What are their uses? Poster is 23" x 35" and is laminated.

731046 \$29.95

Fossils Poster

A fascinating look at fossils, their types, how they form and their use in studying the geologic past. Poster is 23" x 35" and is laminated.

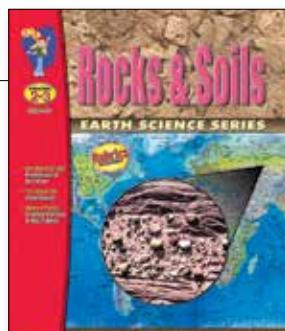
731049 \$29.95



Rocks & Minerals

Lead your students into the geological study of their world. Science experiments include instructions to make fossils, erupting volcanoes, crystals, rock candy and frost. Information cards cover sedimentary, igneous and metamorphic rocks, minerals, crystals, gemstones, volcanoes, earthquakes, and rock collecting. 96 pages.

68878 \$22.20



Rocks & Soils

37 phonics, word study, brainstorming, story writing, reading, and research activities plus 12 science experiments, 10 activity cards, and 2 reproducible student booklets, plus lots of extra suggestions for other activities related to rocks and soils make this a fun and thorough resource. 94 pages.

68876 \$22.20



Rock Cycle 3-D Model Making Kit

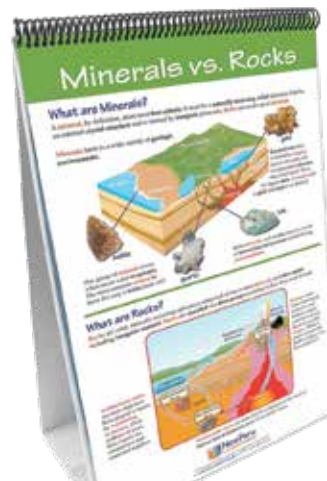
The rock cycle is easy to understand with our dynamic model! Models are powerful tools for teaching science because they provide useful simplifications of structures and processes, helping to make the unseen seen and the complex simple. "My students assembled the rock cycle model this week, and had a blast!" First students make the model rocks using the colourful parts with real rock images. Then use them to look at how rocks are made and the connections between different types of rock. The model covers igneous rocks, sedimentary rocks and metamorphic rocks. The Model Making Kit includes enough materials for students to assemble up to 10 paper models working cooperatively. The comprehensive Teacher Resource Guide included provides illustrated readings, activities, key vocabulary and an assessment, along with teaching opportunities for students to Engage, Explore, Explain, Extend and Evaluate their understanding of the concepts presented.

735477 \$54.95

Rocks Flip Chart Set

The set features 10 double-sided, laminated charts, each 12" x 18" and spiral bound on a durable, free-standing easel. Rocks Flip Chart Set Includes: What is a Rock?, Classifying Rocks, Igneous Rocks Magma, Lava & Igneous Rock, Sedimentary Rocks, Metamorphic Rocks, The Rock Cycle, Identifying Rocks, Use of Rocks & Minerals and Vocabulary Review.

731854 \$59.95



Minerals Flip Chart Set

Minerals Flip Chart Set Includes the following 10 Charts: What is a Mineral?, Minerals vs. Rocks, Properties of Minerals, Crystals & Special Properties, How do Minerals Form?, Mineral Resources, Mining and the Environment, Use of Minerals, Identifying Minerals and Vocabulary Review

731855 \$59.95



EARTH SCIENCE

ROCKS & MINERALS



Geology: Rocks & Minerals Teaching Poster Set

These posters teach students the three types of rock, the steps of the rock cycle, ways to identify minerals, and facts about important minerals. Each poster measures 17" x 22". Set contains four posters, four reproducible activity sheets, and a teacher's guide. **SB48153M \$15.60**

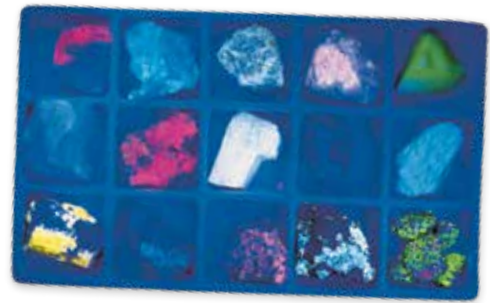


Space Sand™ Classroom Kit

Space Sand™ is extremely similar to the soil on Mars in terms of properties. This unique sand is coated with a special nontoxic material that prevents the bonding of the water and silica sand molecules, which normally occurs when sand and water are mixed. This sand will not get wet and can be formed into shapes under water. The sand will be completely dry when removed from the water. Space Sand™ is even used in NASA Mars exploration classroom experiments. Informative header explains uses and outlines plenty of fun experiments. Includes four 1-lb. bags of Space Sand™ (red, yellow, blue, and natural), 24 biodegradable corn cups, 12 spoons, 12 student handouts, and teacher guide. **SB43147M \$53.00**

World of Minerals & Crystals Workbook - Set of 10

Includes detailed coverage of the names of the most common and important minerals; their physical properties; and how to test these properties to identify an unknown mineral specimen. Also emphasized are the common uses of each of these minerals. The workbook's cross-curricular emphasis provides connections between the world of minerals and history, languages, chemistry and more. Each Classroom Pack includes 10 workbooks as well as a special Teacher Guide providing a variety of approaches for integrating the book into your classroom studies. **731032 \$85.15**



Fluorescent Minerals Collection — Long and Shortwave

This study unit illustrates the response of certain minerals to ultraviolet radiation. Contains some minerals which only respond to shortwave radiation, others which only respond to long-wave radiation, and some respond to both, but with differing degrees of intensity. Fifteen 1½" numbered specimens correspond to key with descriptive materials. Compartmentalized container. **SB09563M \$76.85**



Break Open Real Geodes World's Best Geode Kit

This kit contains 15 premium geodes from 5 different mines (including the brand new Gold Rush Geodes!) No other geode kit offers this variety or quality. Includes safety goggles, 3 display stands, magnifying glass, information guide, and activity booklet! **733784 \$66.30**



Break Open Real Geodes - Basic Kit

This starter science kit includes 4 real geodes from 2 different mines so that you can discover a variety of crystal formations. Included are safety goggles, a geode display stand, and a high quality information guide which will teach your young scientists all about geodes, and will allow them to identify the crystal formations inside. Plus there's an activity booklet with 10 additional puzzles, games and challenges. Science doesn't get any cooler than this! Winner of multiple awards for exceptional geode quality, educational materials, and play value!





Rock Tumbler

Deluxe, large 12-lb. capacity tumbler for the serious rock hobbyist. Rubber hexagon barrel for quiet, efficient operation. Overload protected, continuous duty, fan-cooled motor. 115V, .67 amps, 1/75-hp motor.

9703319M \$372.45

Grit Pack. Contains 1-lb. coarse, 1-lb. fine, ½-lb. prepolymer, and ½-lb. polishing grit.

9703424M \$52.75

Mineral Test Kit with Minerals

This kit supplies students with all the tools necessary for rock, mineral, and fossil identification. Kit includes streak plate, glass plate, hand lens, dropper bottle, magnet, nail, penny, hardness scale, and zip-lock pouch. Minerals include muscovite, hematite, quartz, magnetite, calcite, talc, gypsum, microcline, and pyrite.

SB48458M \$26.55



High Quality Hammer with Pick Head

A flat, sharp face pick excellent for prying out rock. The point end can be used to delve into the structure. 22-oz. head.

SB01851M \$68.85

19 cm Sieve

Set of 4. Solid construction with double handles for easy grip.

733296 \$12.70



Yellow Economy Sieve

445414 \$5.95



Streak Plates

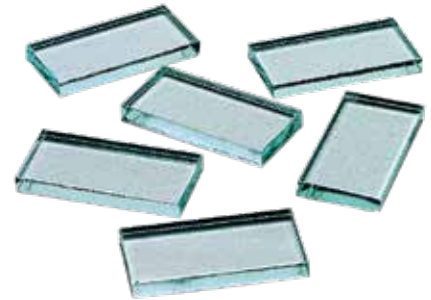
Unglazed porcelain tiles for streak testing of rocks and minerals. Pkg. of 10 plates, each 1" x 2".

733024 \$14.35

Glass Plates

Thick ¼" glass plates for hardness testing of rocks and minerals. Pkg. of 10 glass plates, each 1" x 2".

SB14188M \$22.45



Black Streak Plate

These 1" x 2" unglazed black porcelain tiles are ideal for streak testing of light coloured minerals. The streak test is essential in mineral identification because it allows the colour of the mineral to be obtained. Pkg. of 10.

733022 \$14.35



Screen Sieves Kit

Separate and grade dry soil samples into five different size ranges from pebbles to silt. This set includes one cover, one solid bottom container, and stacking containers with #6, #20, #40, and #100 wire mesh screens.

67830 \$120.00



SPACE SCIENCE

ASTRONOMY



KonusVue™ Binoculars Only

Sturdy rubber armoring for superior gripping capability, even while wearing gloves. Magnification x objective: 10 x 50 WA. Central focusing. Field of view: 122 mt./406 ft. Exit pupil mm: 4. Supplied with case, straps, and instructions in eight languages. Two-year warranty.

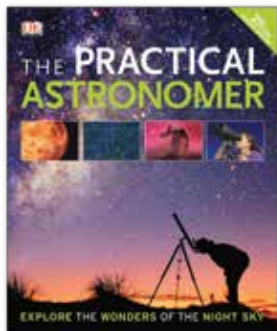
SB37233M \$71.35



The Sunspotter™

Sunspotter™ gives students the opportunity to track sunspots as they appear, move, and vanish. A bright 3" solar image is projected in all of its glory by a powerful 62 mm dia. Objective lens. Students can easily trace the face of the sun and compare it from hour to hour and day to day. The Sunspotter™ makes our closest star a subject of study by even the youngest students. By using a series of mirrors, the device projects an image of the sun onto a white viewing screen. Also great for viewing an eclipse.

SB46150M \$776.25



The Practical Astronomer, 2nd Edition

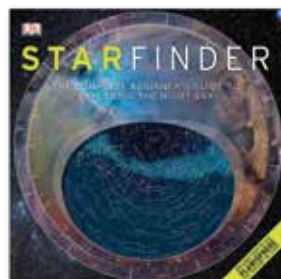
A complete introduction to observing and understanding the night sky, explaining and demystifying stargazing to recognize objects and explain how they move through the sky over the night and the year. 246 pages.

735108 \$34.95

Starfinder: The Complete Beginner's Guide to Exploring the Night Sky

Starfinder lays out the universe clearly, highlighting the signposts in the sky and explaining the cosmology of the stars. 128 pages.

735109 \$29.95



1. National Geographic CF114PH Telescope

The Explorer 114 Telescope is a perfect portal into the realm of deep sky observation. With its equatorial mounting system, the lightweight Newtonian reflector telescope can follow the Earth's rotation to easily track an object as it moves through the night sky. Offering a 114 mm aperture and a 500 mm focal length, the telescope comes with two Plössl eyepieces (26 mm and 9.7 mm) that produce images with excellent definition and contrast. The set also includes an adjustable tripod, a red dot viewfinder, downloadable Stellarium computer software and a star map.

2483M \$205.05

2. National Geographic CF 700SM Telescope with Smart Phone Adaptor

This Carbon Fiber designed 70 mm Alt/AZ Astrophotography low motion mount telescope is perfect for beginner and advanced astronomy. With the red dot viewfinder, you can easily direct the scope to begin taking images through the smart phone mount. The wide field eyepiece will give you brighter, clearer and more brilliant images of the night sky. The full-length tripod will give you the base you need for the slow motion mount.

2485M \$274.90

3. National Geographic 50 mm CF600 Carbon Fiber Pan Handle Telescope

The National Geographic Carbon Fiber Design Telescope can turn the ordinary into the extraordinary for budding junior astronomers. This ideal beginner's scope is easy to use and includes a simple alt-azimuth mount and tripod that allow the user to smoothly move the scope up, down, and side-to-side. It offers a 50 mm aperture, a 600 mm focal length and three eyepieces that allow for varying levels of magnification. It also comes with a red dot finder for easy object location, a moon filter for comfortable viewing when the moon is exceptionally bright, astronomy software and a star map.

2484M \$90.00

GeoSafari® Constellation and Solar System Explorer

View 12 Zodiac constellation with this amazing, hand-held observatory! Project the planets and constellations on any wall or ceiling with the easy-to-rotate tripod. When the room is dark, the built-in red LED can light the way for reading the 28-page explorer guidebook, packed with fun facts and stories about the constellations.

731931 \$39.00



Our Solar System Flip Chart Set

10 Charts double-sided, laminated charts, each 12" x 18". Includes the following 10 Charts:

- Formation of Our Solar System
- Geocentric & Heliocentric Systems
- Parts of Our Solar System
- The Sun
- Measuring Distances in Space
- The Inner Planets
- The Outer Planets
- Comets, Asteroids & Meteors
- Pluto & the Kuiper Belt
- Vocabulary Review

731857 \$59.95



Official NASA Moon Globe

This extraordinary 12" dia. globe accurately depicts the geographical features of the earth's moon, including craters, "seas," and mountain ranges. NASA approved. 15" H.
SB36728M \$134.65



The Constellation Globe

This unusual two-way illuminated globe is sure to stimulate discussion and curiosity in the classroom. Turn the light off and brilliant lithography delineates the firmament's stars, constellations, and nebulae; turn the light on and witness the luminous beauty of over 70 celestial images. Features a molded black base and smoke semi-meridian. Diameter: 12". Height: 16".
SB28577M \$143.95

3-D Solar System

Bring the beauty of the solar system into your classroom. Turn the lights off for an amazing display with the glow-in-the-dark components. Includes eight planets, Pluto, over 200 adhesive stars, string, putty, and a Solar System Guide Booklet.
SB49325M \$34.85



Inflatable Solar System

Explore our universe with this inflatable classroom set. Teach size and distance relationships of planets, the moon, and the sun. Learn rotation, revolution, and orbit through class activities or demonstrations using this realistic looking set. Includes 36" sun and proportionate planets and moon with sizes ranging from 8"-22". Also includes a foot pump, teacher's activity guide, and hooks for easy hanging. Deflate for easy storage.
SB37813M \$72.25

Our Solar System Bulletin Board Chart Set

Each set includes a collection of separate posters, each covering a separate, curriculum topic. Uniquely designed, while one side can be posted for student reference, the reverse features dry-erase activities perfect for individual student review or as learning center activities! Each 12" x 18" Chart is laminated and double-sided - Side 1 features a graphic overview of the topic and Side 2 provides "write-on/wipe-off" activities.



Space Beyond Series

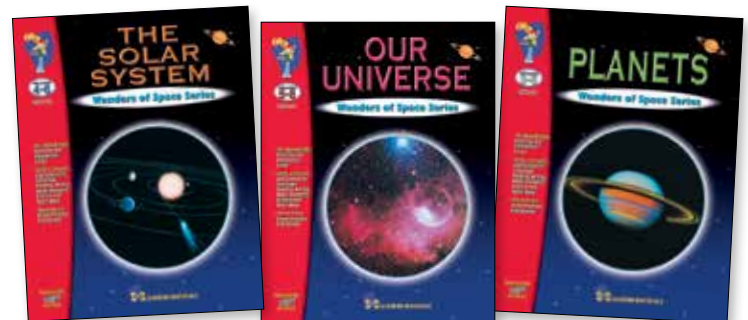
Reading Levels: 3-4

Get the big picture about Space. From our solar system, galaxies and the universe, to space travel and technology. Our resources have information and fascinating facts about the Earth, Moon, Comets, Stars and Constellations, the Milky Way Galaxy, Black Holes, Nebulae, and even Quasars! Simplified language and vocabulary are used to teach these concepts as well as gravity, planetary orbits and the lunar cycle. 60 pages / 6 transparencies.

731584 Solar System \$13.65

731586 Galaxies & The Universe \$13.65

731590 Space Big Book \$27.30



The Solar System

Learn about planets, stars, comets, asteroids, meteorites, moons, and more. Help students improve reading, research, mathematics, brainstorming, word study, creative writing, artistic, and dramatic skills. Information cards and 82 activities included.

69000 \$22.20

Our Universe

Students learn about the solar system, asteroids, meteorites, comets, stars, black holes, quasars, phases of the moon, constellations, and telescopes as they improve their research, math, language, creative writing, and artistic skills. 42 activities plus answer key.

68950 \$22.20

Planets

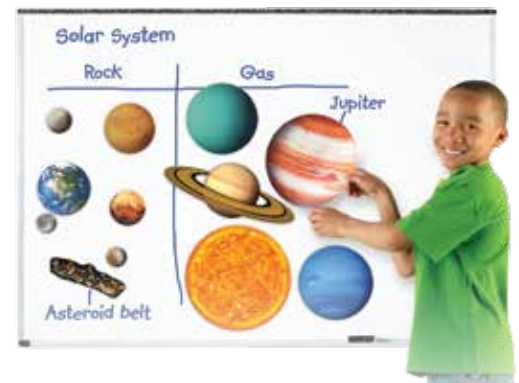
Study the 9 planets in our solar system. Includes information cards, reading cards, research and creative writing cards, and much more! 88 activities.

68952 \$22.20

Giant Magnetic Solar System

Full-colour, realistically detailed magnets capture students' attention as you model space science concepts on your whiteboard. Includes 8 planets, Pluto (dwarf planet), Sun, Earth's moon, asteroid belt and Activity Guide. Largest magnet (sun) measures 10" in diameter.

732615 \$29.00



SPACE SCIENCE

ASTRONOMY



Trippensee® Basic Planetarium Model

Chain and sprocket drive; sturdy plastic arm with compass for locating North Star; Earth globe with map and day/night ring; and moon globe movable to any position. Sun, 6" diameter and Earth, 3" diameter, on a 13" arm; overall height 12", overall length 22". Base dial marked with seasons, months of the year, and signs of the zodiac. A complete, easy-to-read instruction book with diagrams is included.

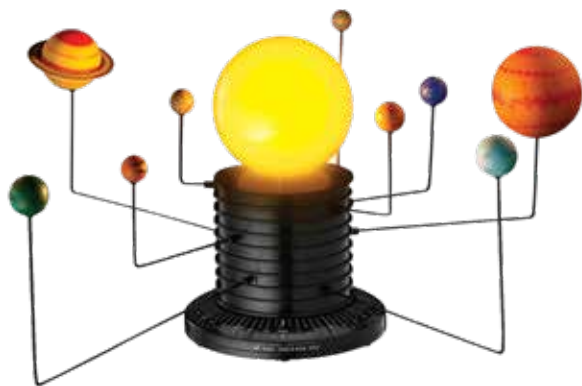
S00562M \$270.45



Trippensee® Lighted Basic Planetarium Model, Electric

An economical, lighted planetarium made by the makers of the world famous Trippensee® Planetarium. The light graphically illustrates solar and lunar eclipses and the phases of the moon. The moon and Earth globes revolve separately. It is made of the finest, toughest, most colourful plastics, with all brass and steel parts accurately formed and machined. This planetarium will give many, many years of trouble-free service.

SB15348M \$289.85



GeoSafari® Motorized Solar System

Set up the solar system to see Mercury, Venus, Earth, and Mars rotating slightly faster than Jupiter, Saturn, Uranus, and Neptune, just like they do in space. Turn off the lights and project a planetarium-style star show on the ceiling for the ultimate in-room space experience! Includes a night light with an auto shutoff feature and guide book packed with facts for curious explorers!

730730 \$84.50



Orbiting Solar System

Set the planets in motion with a flick of your wrist! Build a mechanical model of the solar system including the sun and eight planets (also known as an orrery), wind it up, and watch the planets revolve around the sun. Assemble this complex machine using snap-together plastic parts to learn how the gears and wind-up mechanism work to spin the model. Detail each planet with colourful, realistic-looking printed planet graphics. Discover how a special type of gear called a planetary gear is used to simulate the mesmerizing motion of the solar system. Learn about the order of the planets, their relative sizes, their rates of revolution around the sun, their appearance, and other planetary facts. *Bonus:* There's a built-in expansion slot in case the mysterious Planet Nine is discovered! This kit includes full-colour step-by-step illustrated assembly instructions.

735603 \$49.20



The Orbiter

Completely manually operated unit with 6" sun, 15" arm, 4" dia. geophysical Earth globe, cratered moon, transparent hemisphere shield, and lesson plan.

21565 \$288.95





Solar System Interactive Wall Chart with Free App

This Interactive Wall Chart of the Solar System comes alive with any smart device by downloading the free app printed on the laminated 32" x 42" chart. See and learn about the planets and space probes in 3-D interactive animation.

733695 \$28.50

Planet Poster

Explore the magnificent solar system through this updated poster that includes Pluto among the dwarf planets. Shows the correlated distance between the sun and planets as well as the size of each. Explains each planet's year length, rotation period, and number of moons. 18" x 24".

732626 \$9.95



Enlarged Moon Poster

The second brightest object in the sky after the Sun and the only natural satellite of the Sun, the moon is full of intrigue and mystery, referred to in mythologies and perhaps most famous as the only extraterrestrial body set foot on by humans. Shows eight phases of this stellar wonder. Laminated cardstock. 18" x 24".

SB41039M \$23.15



Moon Phases Poster

This one-colour, 28" W x 8" H poster shows eight phases of the moon. Laminated cardstock.

732612 \$9.90



Moon Phase Classroom Inquiry Set

Conduct an in-depth investigation into the phases of the moon. The six moon-earth-sun globe sets are ideal for small group exploration. Hands-on materials are complemented with rich inquiry activities that engage student thinking. The printed teacher's guide and accompanying CD-ROM include pre-assessments, SMART Board™ activities, a review of new vocabulary, extensions, and final assessments.

SB49076M \$237.45

Moon Phase Demonstrator

Where and when does the moon appear in the sky when it has a particular phase? When is the moon visible? When does the moon rise and set in relation to sunrise and sunset? This device helps students conceptualize the answers to these questions by showing how the moon's appearance changes over a period of one month. A phase of the moon is selected by turning the front disk, which correctly places the relative position of the sun. The Earth's rotation is simulated by rotating the disks together from sunrise to sunset, illustrating the relative paths of the sun and moon. The rear disk is screened with a visualization of the perceived shape of the moon throughout the lunar cycle. Comes preassembled.

SB48259M \$66.85



Night Sky Projector

It's a galaxy of stars in the palm of your hand! Beam images of space onto any surface for a close-up view of stars, planets and more! Features easy-carry handle and stand for a projector mode. Projector measures 5" in diameter. Includes 2 discs, with 8 images on each disc, plus 2 AA batteries. Unit features automatic shut-off to conserve battery life.

730259 \$45.50



Sun-Earth-Moon System Flip Chart Set

10 double-sided, laminated charts, each 12" x 18". Includes the following 10 Charts:

- How the Earth Moves
- Earth's Hemispheres
- Seasons on Earth
- Gravity & Motion
- Earth's Moon
- Phases of the Moon
- Eclipses
- Tides
- Missions to the Moon
- Vocabulary Review

731856 \$59.95



PHYSICAL SCIENCE

FLIGHT & ROCKETRY



Skyrunner Delta Kite

This colourful kit with a 40-inch wingspan is easy to assemble, launch, and fly. Stitched, reinforced seams, heavy-duty rip-stop nylon, and flexible fiberglass struts help the kite hold up to countless hours of flying time.

735057 \$20.50

**GREAT for
TEACHING
PRINCIPLES of
FLIGHT!**



Rainbow Stunt Kite

This colourful dual-line stunt kite with a 33-inch wingspan is perfect for those looking for a more advanced kite-flying challenge. The kite comes with two strong, premium kite lines (118 feet each) on easy-grip line holders to allow stunts and tricks, and helpful flying and safety tips.

735059 \$20.50



Delta Dart Classroom Pack

Features an improved prop assembly. Comes with bilingual (English/Spanish) instructions. Classroom pack includes everything needed to build 35 planes.

9721406M \$76.75

Whitewings® Paper Glider Competition Kit

Ideal teaching aid for an entire classroom. Kit contains: 30 precut paper airplanes (all the same design), 30 sets of four-page assembly/flight student instructions, and two four-page teacher manuals.

SB31179M \$94.35



Bird Kite

Decorate and fly beautiful birds! These mini-kites are perfect indoors or out. Decorate with paint, marker or crayon. Add the self-adhesive support bars to the bird and tie on the string. Includes plastic straw handle and idea guide. A great introduction to flight! 6x7" (15 x 18 cm). 32 projects.

733104 \$18.50



77816



731410

Taking off With Flight

Students will learn about the principles of flight, including forces acting on one another. 96 pages.

731410 \$20.40

Characteristics of Flight

Explore the characteristics of flight and the properties of air through experimentation and investigation. This unit includes experiments, student activities, an invention conference, scientific method, famous aviators, types of aircraft, glossary of terms and answer keys. 96 pages.

77816 \$20.40



Soaring into Flight

Ms. Frizzle and her students take Young Scientists soaring into flight with a dozen dynamic experiments. Youngsters build a balloon-jet, experiment with parachutes, make a spinner soar, create the ultimate paper airplane, make paper magically rise, move floating ping pong balls, collapse a juice box, lift off rockets, and much MORE! Get ready to Soar into Flight!

778811 \$29.85



Thames & Kosmos Ultralight Airplanes

Construct awesome flying gliders with ultralight plastic and bamboo parts. Build five different types of planes with different wing configurations to learn how wings provide lift and how planes stay up in the air.

735602 \$28.95



Straw Rocket Maker Project

Rockets are always fun. That is a simple truth of the world. With the Straw Rocket Maker Project, students play with rockets and design their own rockets while learning about projectile motion, aerodynamics, gravity, and much more. For a fun and easy activity to illustrate oodles of scientific principles, look no further than this introductory rocket project. The Straw Rocket Class Pack will help teach projectile motion, centre of gravity, initial velocity, introductory aerodynamics, and more. This pack includes enough Precision Straws, clay, and fin material for 30 students to make four rockets each, which enables them to experiment with different weights, straw lengths, and fin designs.

What you'll get:

- Straw Rocket Class Pack with:
 - 120 Precision Straws
 - Modeling clay
 - 100 index cards (3" x 5")
- 3 Straw Rocket Launcher
- Storage bin
- Bin prep sheet
- Labels

735622 \$975.95



Bottle Rocket Launcher Kit

Build rockets from ordinary plastic soda bottles that can soar to heights in excess of 150 ft. All you need is water!

- Bottle rocket launcher
- Molded resin launch pad supports the launcher stakes of the bottle rocket launcher on non-soil surfaces
- 2-litre bottle
- An altimeter you can assemble to measure the height of each flight
- Instruction sheet

SB52970M \$108.55



Bottle Rocket Launcher

Build rockets from ordinary plastic soda bottles that can soar to heights in excess of 150 ft! All you need is water! This solid aluminum bottle rocket launcher allows you to pressurize any plastic soda bottle (from 500 ml to 2 liters) with an ordinary bicycle tire pump. A quick tug on the release cord and your rocket climbs skyward. Included with the launcher is an instruction sheet and an altimeter you can assemble to measure the height of each flight.

SB21429M \$62.35



Rokit Kit

Attach the Rokit to a standard plastic bottle, part fill with water and use a cycle pump to power it for automatic launch! This exciting kit has the capability of providing repeatable experiments. Rokits flies to around 30 meters (100 ft), which creates great fun in learning science.

731916 \$49.00



Micro Rocket

Fill the tube with baking soda and vinegar, then watch this micro-rocket blast-off.

735146 \$7.00

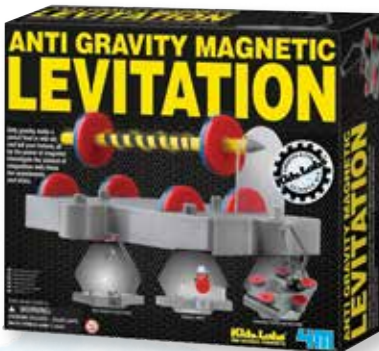


Balloon Hand Pump
09950 \$14.45



Balloons

09930 18cm, Pkg. of 12 **\$3.25**
08489 25cm, Pkg. of 12 **\$3.50**
50315 Assorted, Pkg. of 144 **\$28.95**



Levitation Science

Learn how magnets can create levitation with the experiments in this fun filled kit. Build a levitating pen that floats and rotates in the air, create a maglev model, a magnetic fortune-teller and more.

77674 \$38.00



Nasco Hot Air Balloon Kit

Students first build a basic hot air balloon from a blueprint to learn about how it lifts from the ground, stays afloat, and descends safely. Later, students will plan, build, and test a new design to see if they can complete a challenge. Includes heat gun, data logging equipment, balloon supplies, and educator's guide (student guide is contained in the educator's guide). For 30 students.



PHYSICAL SCIENCE

SIMPLE MACHINES



Tabletop Pulley

Great for experiments calling for a pulley at different heights. Adjusts over a height range of 10 cm, locks in place with a thumbscrew, and rotates a full 360°. Two-piece apparatus consists of glass-filled, nylon-molded clamp and pulley with blue sheave attached to a stainless steel rod. Clamp fits tables up to 5 cm thick.

73024 \$28.90

Pulley Bench and Rod Mounting

Consists of a 70 mm/ 2¾" diameter metal pulley, mounted on a metal frame, which can be clamped on a table up to 42 mm/ 1½" thick. The frame also has a hole for a rod up to 12 mm diameter to pass through. Pulley can also be mounted on a rod.

SB43487M \$30.95



Motor Pulleys

Package of 10. Push fits directly onto the motor shaft providing a direct drive pulley.

51784 \$3.50



Motor Bushing

Package of 10. Push fits into wheels, pulleys or gears with 4mm or 3/16" hole, so that it will fit on motor shaft.

51788 \$4.75



Adjustable Bench-Mounting Pulley

Strong, all-metal construction. Height can be adjusted vertically and tightened at any point from parallel with the clamping surface up to 2" above it. Mount on a surface up to 2" thick. Aluminum pulley is 1-1/8" dia.

SB48967M \$11.15

1. Pulleys

Excellent quality, free-running pulleys. The sheaves are 50 mm in diameter and are made of rigid plastic. The block is constructed of metal with swivel hooks at the top and bottom. Colour may vary.

Single-Sheave Pulley.

48064 \$5.55

Double-Sheave Pulley.

SB12100M \$6.15

Triple-Sheave Pulley.

SB10810M \$8.65

Quadruple-Sheave Pulley.

SB10811M \$10.00

2. Twine for Use with Pulleys

51662 \$6.15

3. Double-Tandem Pulley

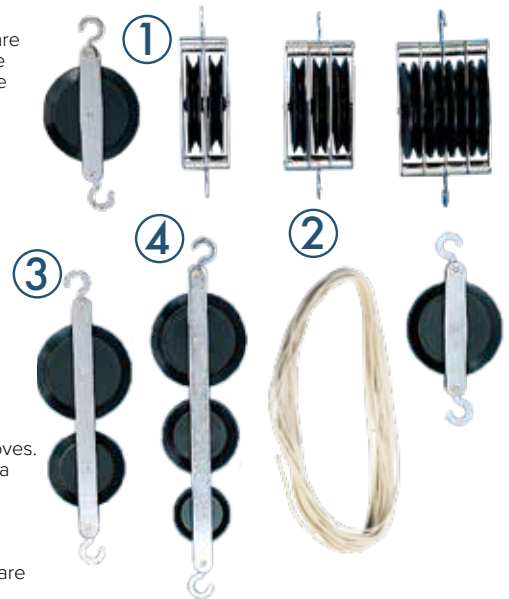
Free-running pulley with rugged plastic, deep V-grooves. The sheaves are 1½" and 2" in diameter, mounted in a heavy nickel-plated frame with a hook at each end.

730277 \$5.20

4. Triple-Tandem Pulley

Similar to 730277 in construction, but sheave sizes are 1", 1½", and 2".

730278 \$5.80

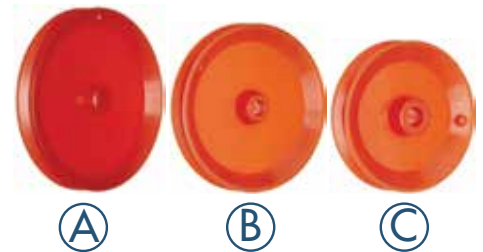


**Best
SELLER**

Assorted Pulleys

Set of 100 pulleys consists of 25 each of 40 mm, 30 mm, and 20 mm dia. Pulleys (with 3.2 mm bores); and 10 mm pulleys (with a push fit to 2 mm motor shaft).

20098 \$22.70



Pulley 10 Packs

Coloured plastic pulleys with deep V-grooves. 4mm dia. centre hole.

A. 50mm Diameter

730237 \$5.45

C. 25mm Diameter

730235 \$5.25

B. 38mm Diameter

730279 \$5.05



Pulleys

Excellent quality, free-running pulleys made of rigid plastic for increased durability. Deep V grooves with 50mm sheaves. Plastic pins allow you to build single, double, or triple sheave pulleys, and hinges can be used to join pulleys.

03743 Single Sheave \$2.30

03744 Double Sheave \$3.30

03745 Triple Sheave \$4.75



Discovery Kits® Pulleys

Contains 4 pulleys (two singles, one double and one triple sheave, plus joining pin) and instructional guide with suggested classroom activities.

70019 \$16.95





Gears! Gears! Gears!®

A. Movin' Monkeys

Kids develop their own "gears jungle" or use the easy-to-follow instructions. Includes 136 pieces.
733183 \$68.45

B. Building Set

Includes 100 pieces.
733179 \$41.95
150 piece Super Set
Includes storage tub & activities guide.
733400 \$68.95

C. 100 Piece Deluxe Building Set Pink

Set of 100 pieces includes colourful gears, connectors, interlocking bases, and a handle.
730756 \$54.50

PHYSICAL SCIENCE SIMPLE MACHINES

Meshing Around with Gears

A comprehensive kit with all of the materials required to build basic models including a winch and a trundle cart using gears, coroplast and JAX clips. The 16-page Teacher's Guide covers many basic gearing principles including direction of rotation, idlers, gearing up and down, and compound gearing. Students will be well on their way to understanding how gears work and applying that knowledge to designing their own constructions.

70021 \$26.10
20818 Guide Only \$3.05



**CLASSROOM
FAVOURITE**

Gears in Bulk

Sets include 40, 30 and, 20-tooth gears with 4mm bore and a 12-tooth gear with a push-fit to a 2mm motor shaft. There are 3 inserts on each sprue, which allow the 4mm bore to reduce to a 3mm bore. All gears are beveled to allow 90° meshing. The 40-tooth gear has an extra hole to create eccentric movement or for a crank handle (fits 4mm dowel).



0.5kg Bag (mixed colours).
21810 150+ pieces \$35.20

1kg Bag (mixed colours).
21726 300+ pieces \$66.75

K'NEX Education



Gears

180 K'NEX pieces per set and enough building instructions for 7 real world models. Demonstrates spur, crown and sprocket gear systems. Comes packaged in a strong, stackable storage solution with dividers. Teacher's Guide now included on CD with all sets.

76852 Individual Set \$79.95
77106 Class Pack of 8 \$499.95

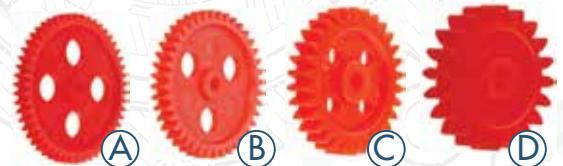


Deluxe Gear Box Complete Set with Guide

This 744 piece set contains multiple gears, pulleys, axles, chains, and frames to create an endless number of STEM projects. Contains a clear drive unit that can move the gears and other pieces forward or reverse. Requires one "C" battery (not

Gears

Made of coloured plastic. 4mm dia. Centre hole.



A. 50 Tooth 10 pack
730233 \$6.95
B. 40 Tooth 10 pack
730271 \$6.15
C. 30 Tooth 10 pack
730231 \$5.45

D. 20 Tooth 10 pack
730272 \$7.45
10 Tooth 10 pack
730273 Not Shown \$5.65

Gears 7 Piece Set

Set includes one of each 10, 20, 30, 40, 50 Tooth gears and two bushings.
730275 \$2.95



Worm Gears
10 plastic gears.
50006 \$18.15



**Plastic Bushings,
Package of 10**
Outer dia. 4mm, Inner dia. 2mm.
730276 \$2.95

Mechanics: Cams & Cranks

Learn how you can transmit power using Cams and Cranks and how they can be used to convert reciprocal to linear motion. Discover how these mechanisms are crucial elements of many machines even though they are not considered as "Simple Machines". Build 8 working models such as a fishing crane, an oil pump, a moving figure, a moving bridge, a sewing machine and a flying eagle. You can find easy-to-follow building instructions for all models either online or in the booklet included. The booklet provides detailed explanations of the different scientific principles applied and incorporates innovative experimental activities for hands-on learning.

77815 \$89.30

Mechanics: Gears & Worm Drives

77813 \$89.30



PHYSICAL SCIENCE

SIMPLE MACHINES

Lever Knife-Edge Clamp

Make a balance out of a meterstick with this metal clamp. The wire stirrup can be used for suspension of weights.

SB13912M \$4.45

Use with the Senior Metre Stick in the Elementary Math catalogue

01100 Senior Metre Stick \$6.90



Friction on an Inclined Plane

The inclined board can be set at any angle between 0° and 45°. A hanging pan is provided to hold the desired weight. Two wooden boards with different sizes and a metal plate are included. Students can determine the coefficient of static friction and the coefficient of sliding friction and verify the normal and frictional components of the force exerted by the plane. Activity manual included. 26" x 15" x 4".

733396 \$54.00



Wooden Fulcrum Balance Scale

The further from the pivot point a force is applied, the greater its effects. This basic principle is behind the operation of the lever and many other basic devices. Teacher's Guide included. Desktop model. 13.97 x 46.36 x 6.99 cm.

77084 \$55.95



New York Demonstration Balance

This balance is designed to demonstrate the principle of operation and mechanical advantage of levers. Consists of a 50 cm ruler; a knife-edge clamp to support the ruler; a fulcrum support stand; a 50 g and 100 g mass; and two knife-edge clamps to attach the masses to the lever.

SB16550M \$74.00

Slotted Weight Set

Steel weight set that includes one 100 g hanger and nine 100g slotted weights. Total weight: 1,000 g.

SB46832M \$61.95



Wooden Simple Machines

Each model includes a detailed activity guide which includes:

- Classroom experiments
- Practical applications
- Historical perspective

Student Models:

- Measure 6"-8"
- Excellent for small groups or individual study

Wooden Simple Machines Set #2

Includes one each of Wheel and Axle, Gear Train, Pendulum, and Screw.

Student Model Set #2.

SB40568M \$223.45

Lever

A pivoted, rigid body to which forces can be applied at two or more points to transmit and modify force and motion. Great for demonstration in classrooms.

7.32 x 6.99 x 14.94 cm.

77086 \$33.85



Inclined Plane

Defined as a sloping plane for lifting heavy loads to high places. The small weight car also has small wooden wheels. Weight included.

42.42 x 9.65 x 7.87 cm.

77088 \$55.95

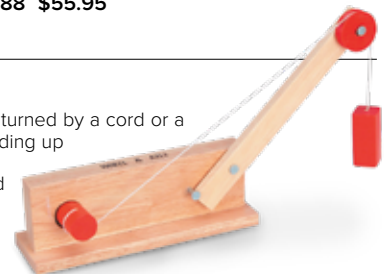


Wheel and Axle

A device consisting of a grooved wheel turned by a cord or a chain with a rigidly attached axle for winding up weight. Sometimes the chain or cord is replaced by a crank or spike and is used in hoisting apparatus such as cranes.

27 x 11.43 x 10.49 cm.

77071 \$55.95



A. Gear Train

A system of two or more toothed wheels meshed together so that the motion of one directs the others to employ a force in a direction in which the resistance is to be moved. Desktop Model. 40.13 x 16.76 x 9.4 cm.

77078 \$87.20



B. Gear Rack

41.91 x 17.15 x 6.99 cm.

77061 \$66.30

C. Motion Converter

39.7 x 16.21 x 10.16 cm.

77080 \$77.85

Pendulum

As the pendulum swings back and forth, its energy changes from potential energy into kinetic energy. But the pendulum can be used as a device to explore other concepts as well. The time for one swing doesn't depend on the size of the swing or the mass at the end of the pendulum, only on the length. This is why the pendulum came to be used in the earliest accurate clocks. 40.97 x 9.53 x 16.51 cm.

77090 \$55.95



Screw

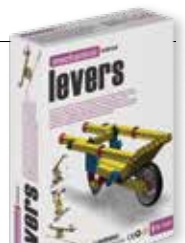
An example of a simple machine, which converts a circular motion (the turning of the screw) into a linear motion. It also lets you amplify the force a great deal, since turning the screw only moves the end of the screw a small amount. 17.78 x 12.7 x 10.16 cm.

SB40566M \$49.75



Levers

Learn how Levers are used to increase force and lift heavy objects and how the use of levers can change the direction of motion. Build 7 working models including a parking gate, a see-saw, 2 types of weighing scales and a wheelbarrow. A 36 page activity book is included with innovative experiments and detailed explanations of the different technological principles applied! A booklet with detailed building instructions is also included.





Mechanics: Pulley Drives

Build 8 working models such as a material lift, a stationary bike, a crane bridge, a blender, a construction crane and a windmill. You can find easy-to-follow building instructions for all models either online or in the booklet included.

77817 \$74.70



Block and Tackle

One pulley can be used to change the direction of the force applied by a cord. A small force on the cord can be used to lift a large weight. Experimenting with the device shows why lifting the block by a short distance requires that the cord be pulled a long distance. Desktop Model. 16.84 x 34 x 10.8 cm.

77094 \$55.95



Pulley

Grooved wheels used with rope to change direction and point of application of a pulling force. Desktop Model, weight included. 41.91 x 10.16 x 16.84 cm.

77067 \$55.95



Metal Pulley with Metal Frame (50mm)

48544 Single Sheave **\$7.80**

48546 Double Sheave **\$9.90**

48548 Triple Sheave **\$12.65**



K'NEX® Intro to Simple

Machines: Levers and Pulleys

Models demonstrate three lever classes and fixed, moveable, and combination pulley systems. 178 K'NEX pieces to build eight replicas of real-world machines, one model at a time. Supports 2-3 students working as a team. Teacher's Guide on CD included. Packaged in a strong, stackable storage tray with movable dividers and snap-on lid.

76850 Individual Set **\$79.95**

77108 Class Pack of 8 **\$499.95**



73028

Pulleys in Motion Class Set

The focus of the set is to provide hands-on activities that are easy to understand as well as offer both intellectual and practical experience for students. Set contains: 18 single sheave pulleys; 12 double sheave pulleys; 12 triple sheave pulleys; 6 spring scales (500 g, 50 N); roll of twine; and 20 pulley chain links. Includes a 32-page teacher's guide titled Pulleys in Motion that gradually introduces students to fundamental pulley concepts. Contains reproducible student activity sheets and assessment ideas.

73026 \$114.05

Pulleys in Motion Book 73028 \$13.30



STEM Simple Machines Activity Set

Introduce kindergartners to all 6 Simple Machines. Set includes Inclined Plane, Lever, Wedge, Pulley, Wheel and Axle. Also includes 10 activity cards, and a comprehensive Teacher Guide.

730262 \$50.00



PHYSICAL SCIENCE

SIMPLE MACHINES



SciQuest® Simple Machines Kits

This interactive kit allows students to grasp the fundamental science concepts of simple machines. Already aligned with the Next Generation Science Standards, students investigate the use of levers to multiply force and speed and change direction, the pulley as a modified lever, the inclined plane, ideal and actual mechanical advantage, and the efficiency of machines. When used in conjunction with your in-place curriculum, this SciQuest® kit will help you add a meaningful and exciting dimension to the teaching opportunities you provide for your students. Teacher's guide included.

Simple Machines Multi-Group Kit. Contains enough materials for six work stations.
SB50709M \$527.75

Simple Machines Demonstration Kit. Contains enough materials for one work station or a classroom demonstration.
SB19237M \$124.00



SciQuest® Forces, Motion, and Simple Machines Kits

This SciQuest® has been designed to incorporate a wide range of interesting hands-on investigations to enhance your existing science curriculum. Aligned with the Next Generation Science Standards, this kit covers the fundamental science concepts of forces, motion, and simple machines. Investigations include force couples involving "action and reactions," sliding and rolling friction, centrifugal and centripetal forces, velocity, simple periodic motion, periodic motion of a pendulum, uniform linear motion, accelerated motion, efficiency of machines, ideal and actual mechanical advantage, pulley systems, the pulley as a modified lever, the inclined plane, and the use of levers to multiply force and speed and change direction. Teacher's guide included.

Forces, Motion, and Simple Machines Multi-Group Kit. Contains enough materials for six work stations.
SB16725M \$931.35

Forces, Motion, and Simple Machines Demonstration Kit. Contains enough materials for one work station or a classroom demonstration.
SB50706M \$248.25

Loop-the-Loop Apparatus

This unit demonstrates the transformation between kinetic and potential energies when a steel ball runs on the 52" looped aluminum track. 8" dia. loop. Track is mounted on a 11 1/2" x 4" sturdy cast iron base. Attached basket safely catches ball. Includes two chrome plated steel balls. 18" x 14" x 4". One year warranty.

SB40673M \$52.35



Second Law of Motion Apparatus

Designed to propel one ball horizontally while at the same instant releasing another to fall vertically. The spring can be cocked at two different tensions. The metal platform is 15 cm long and has a 1 cm dia. rod attached to permit support at any desired height.

SB10376M \$38.55



Collision in Two Dimensions

This apparatus provides data for investigating conservation of momentum and kinetic energy in collisions. It can also be used to compare elastic and inelastic collisions. A curved aluminum track and adjustable target support form the core of the unit. The kit provides two steel balls, a glass ball, a hollow wooden ball, and a plumb bob. Unit requires a C clamp (not included) for mounting track to tabletop.

SB16605M \$34.85



Newtonian Demonstrator

Demonstrates Newton's Third Law of Motion and the principles of conservation of momentum. This law states that action and reaction are equal and opposite. The unit consists of a walnut support with five nickel-plated steel balls. Dimensions are 9" x 7" x 9" H overall.

SB16568M \$56.15



Newtonian Demonstrator

An excellent device for demonstrating Newton's Third Law of Motion and the principle of Conservation of Momentum. The unique design provides for better results and stability. 5" L x 4-1/2" W x 6" H.
732600 \$30.95



BricQ Motion

Engages students in STEAM learning as they experiment with forces, motion and interactions in the context of sports. BricQ Motion provides easy, hands-on learning experiences that spark cool “aha” moments, as students set LEGO® bricks in motion without the need for technology.

LEGO® Education BricQ Motion Essential Small Group Set (2 students)

The Small Group Set Includes 1 set of LEGO® Education BricQ Motion Essential (735533), 2 packs of LEGO® Education BricQ Motion Essential Personal Learning Kits (735534).

735537 \$219.95

LEGO® Education BricQ Motion Prime Small Group Set (2 students)

The Small Group Set Includes 1 set of LEGO® Education BricQ Motion Prime (735535), 2 packs of LEGO® Education BricQ Motion Prime Personal Learning Kits (735536).

735538 \$219.95



735537

735538



LEGO® Education BricQ Motion Essential Set (2 students)

523 LEGO® elements in the set include 4 minifigures and a variety of easy-build elements, gears, weight bricks, springs, a measurement element, a paper holder and more. 2 units of 7 x 45-minute lessons (1 each for lower and upper primary grades), plus math and language arts extensions for additional learning.

735533 \$194.90

LEGO® Education BricQ Motion Prime Set (2 students)

562 LEGO® elements in the set include 4 minifigures and special mechanical elements, like gears, springs, wheels, balls, weight bricks, pneumatics, fan blades, measurement elements and more. 1 unit of 7 x 45-minute lessons plus math and language arts extensions for additional learning.

735535 \$194.90



Continue the classroom learning experience wherever your students are with the Personal Learning Kit, a powerful extension of LEGO Education classroom sets that enable educators to continue delivering STEAM curricula and drive strong learning outcomes in a hybrid learning environment.



735536

735534

This 62-element supplementary kit for primary school students includes building instructions and enrichment lessons designed for one student. Designed to work together with the classroom sets, this supplementary STEAM learning experience comes with additional teaching resources and student worksheets that deepen the student's understanding of what they've learned in class for a true hybrid-learning experience.

**LEGO® Education BricQ Motion
Essential Personal Learning Kit, 62pcs**
735534 \$16.90

**LEGO® Education BricQ Motion
Prime Personal Learning Kit, 78pcs**
735536 \$16.90



Best
SELLER

Student Force Table

The classic table for studying a combination of forces! A steel support tube, cast legs, leveling screws, and a laminated table top make this unit very stable and highly functional for the study of equilibrium of force. It is supplied with four all-metal precision pulleys, two large force rings, eight small force rings, cords, four 50 gram weight hangers; eight 5 gram slotted weights, four 10 gram slotted weights, thirty-six 20 gram slotted weights, and instructions. 16-1/2" x 16-1/2" x 5-1/4". Allow extra delivery time.

Z19337M \$291.65

Centripetal Force Kit

Use to show the effect of mass, radius, and velocity on the centripetal force of a rotating body. The experiment uses the weight of one to twenty 1 g masses from one end of a cord as a counterweight to the pull of a rubber weight swinging in a circle overhead. Includes handle, sturdy cord, rubber weight, 20 masses, and instructions.

SB46995M \$20.25



Dynamic Cart Kit

Demonstrate and teach the conservation of momentum, force, and motion with these high-quality aluminum carts. The carts feature grooved wheels with excellent minimum friction bearings and a center pole. Add weights to the pole or use it as a photogate. On one edge of each cart is a metal hammer for release of spring-loaded trigger for force bar, while the other edge contains a clip for holding recording paper. Includes two carts and four weights (each 250 g). 6" x 1 1/8" x 3 1/2" H (including pole).

SB48980M \$137.65



Impact Car

What better way to study the momentum changes of varying mass than with a visual measure of its force? The impact car is equipped with a spring scale and a slide that is displaced on impact against a wall or similar obstacle. This slide remains in its displaced position until reset. The student rolls the car down the ramp and measures the amount of impact. Next, more mass is added inside the car and the experiment is repeated. The student can take direct readings from the scale to measure the increasing force. Instruction sheet included.

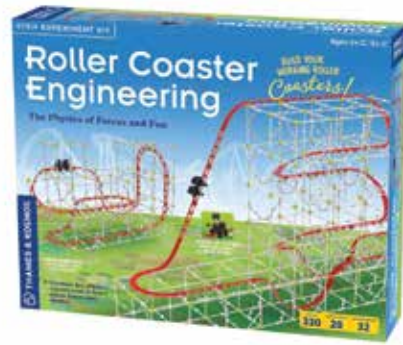
732604 \$28.00



Digital Velocity Speed Gun

Point-and-shoot digital speed gun accurately measures speeds of objects in motion. Great for physical science/math correlations. Dozens of applications. Large LCD screen. Speeds +/- 1.0 mph; measure a baseball at 90 ft.; measure a vehicle up to 1300 ft.

SB44701M \$281.75



Roller Coaster Engineering

Build and experiment with dozens of roller coaster models to make learning the physics of force, motion, and energy as fun as a day at the amusement park. Piece together the sturdy frame structures and then attach the flexible track to it to build and test endless roller coaster designs. Experiment by varying the weight of the cars and varying the slope, length, and direction of the track. Get a practical introduction to many physics principles including gravitation, potential energy, kinetic energy, free fall, projectile motion, friction, centripetal force, velocity, acceleration, and more. Conduct hands-on physics experiments to learn about force, motion, and energy. Complete challenges that require you to build roller coasters of all shapes and sizes. Adjustable weight cars to experiment with force and momentum. 330 pieces.

735607 \$83.95



Student Projectile Launcher

Accurate, safe, and easy-to-use device makes it easy to demonstrate and study projectile motion. Use the launching cable from behind the unit to place shots within a 3" circle at 78 3/4". The cocking level eliminates the need for a ramrod down the barrel. Features three position settings for three different ranges. One-piece aluminum construction provides strength and durability. Includes instructions.

SB49115M \$155.15

Ballistics Car with Remote Trigger

Demonstrate the independence of vertical and horizontal motions with this fun apparatus! Car consists of a four-wheeled cart carrying a vertical tube with a spring-loaded piston inside. The tube is loaded with a ball and the car is set in motion. During the motion, the piston is released remotely by a wireless signal, projecting the ball upwards out of the tube. Both the ball and the cart share the same horizontal velocity, which is unaffected by gravity, so that when the ball falls back down, it lands in the tube and does not get "left behind" by the cart. Cart includes a conical rubber catcher to compensate for slight trajectory variations. Supplied with two 3/4" steel balls. Requires one 9V battery (not included). Includes operating instructions.

SB51329M \$142.00



Fan Cart

This basic inexpensive fan cart demonstrates Newton's principle of action and reaction. The fan cart is powered by two "AA" batteries (not included). Batteries are contained in the removable power unit, and the fan is controlled by a switch. The propeller delivers a thrust of about 88 mN, accelerating the cart at 0.4 m/s². A transparent plate can be attached to show the effect of reversing the airflow. Includes activity guide. Cart measures 5 5/8" x 3" x 4 7/8". Transparent plate measures 4 3/4" x 4 7/8" x 1/8".

731490 \$40.15





Deluxe Hall's Car

This lightweight, nearly frictionless Hall's Car is ideal for studying the relationship between work and energy. It demonstrates the vector forces in acceleration or static force studies and can be used to determine the coefficient of friction. Features high-strength aluminum wheels; axle mounts in cone bearings for low-friction operation; and a wide, injection-molded plastic body with low profile for bulk loads. Has open wheels and a deep well for weights. Instructions included.

SB47661M \$26.25



Hall's Car

This lightweight, nearly frictionless Hall's Car is ideal for studying the relationship between work and energy. It demonstrates the vector forces in acceleration or static force studies and can be used to determine the coefficient of friction of a rolling surface. Features oil-free sleeve bearings that never need adjustment and a wide body with low profile for bulk loads. Colourful ABS plastic car has covered wheels and deep wells for weights. Wheels snap back into place if dropped. Contains punched hole for attaching hook or string. Includes instructions.

SB31086M \$17.15



Constant Speed Vehicle

A popular way for introducing the ideas of velocity and acceleration. This product has a three position switch so that it can be powered in either direction, a stable platform for carrying objects, a hook for towing, and blunt ends for pushing. A spacer is included to take the place of one battery for half speed operation. Requires two AA batteries.

SB39353M \$44.75

Constant Velocity Car

Effectively holds a uniform speed for conducting kinematic experiments. Car can be set to travel at two different speeds by changing the batteries in the motor. Requires either two "C" batteries (not included), two "AA" batteries (not included), or one "C" battery (not included) in combination with a jumper (included). 6 3/4" L x 3 3/4" x 2 3/4" H.



Friction on an Inclined Plane

Use this device to study the friction between two surfaces and the forces on an inclined plane. The inclined board can be set at any angle between 0° and 45°. A hanging pan is provided to hold the desired weight. Two wooden boards with different sizes and a metal plate are included. Students can determine the coefficient of static friction and the coefficient of sliding friction and verify the normal and frictional components of the force exerted by the plane. Activity manual included. 26" x 15" x 4".

SB43079M \$73.75



Inclined Plane with Protractor

This complete set includes an inclined plane with pulley and protractor, a Hall's carriage, and a standard weight hanger. The wooden inclined board measures 24" L x 3 3/4" W and can be set at any angle between 0° and 45°. Instruction manual included.

SA05707M \$70.25



Friction Block and Surface Set

Introduce the concept that friction depends on the nature and smoothness of materials. Kit consists of three wooden blocks measuring approximately 3 5/8" L x 2 3/4" W with hooks. The first block has a highly polished side, the second has a sandpaper side, and the third has an aluminum side. Complete with polished wooden base measuring 14" L x 2 3/4" W.

SB40933M \$20.00



Friction Cube

An excellent way to teach and demonstrate static friction on four different textured surfaces. The wooden cube features a very rough, a plain wood, a plain, and a slightly textured surface, and comes with a hook on one side for pulling along an inclined plane or by attaching to a spring scale. Each side is 2".

SB48973M \$16.95



Inclined Plane Wood

An economical version of the traditional wood inclined plan. Features an adjustable-angle pulley and 5/16" dia. cross hole for support rod. Measures 31 1/2" (80 cm) L x 4 3/4" (12 cm) W.

SB45827M \$47.25



Friction Apparatus

This set includes a friction block and a friction board, both made of smoothly finished pine wood. The friction block has a hook for spring scale and two compartments for additional weights. It can be placed face-up or sideways. Students can vary the weight or area of contact to see their impact on the friction force. Comes with three 50g weights and a 100g spring scale. Size of board: 20" x 2". Size of block: 4" x 1 1/2" x 1".

SB30030M \$32.45



PHYSICAL SCIENCE

FORCE & MOTION

Gumball Machine Maker - Super Stunts and Tricks

Super sweet stunts! Build your own gumball machines and learn physics lessons in the process. A turn of a handle dispenses one gumball at a time out of the clear storage globe and down the track. The track segments can be moved around on the base to create an almost limitless number of different gumball machines. As the gumballs roll down the track, they perform cool stunts and tricks. Stunts include a pulley lift, pendulum, funnel, trampoline, variable-slope ramp, pinball launcher, and domino slide. Each segment of the track teaches a different lesson in mechanical physics, allowing users to explore topics including simple machines, force, motion, momentum, gravity, Newton's laws, energy transfer, and more. Trial-and-error experiments teach in a fun, hands-on way.

735604 \$66.90



Internal Combustion Engine Model Gasoline Motor

Highly-detailed engine model perfect for any technology, physics, or general science classes. Four-stroke operation is demonstrated by the gear-driven timing mechanism, valves, ignition system, and more. DC power input is available to power a lamp, if desired, to represent the spark or glow plug ignition. One-year warranty.

SB37298M \$74.65



STEM Force & Motion Activity Set

Get your motor running with real STEM learning for kindergarten. Learn all about the principles of motion with this fun set. Includes 2 cars, double sided ramps and trells, pendulum ball and weighted blocks. Includes Activity Cards, and a comprehensive teacher guide.

730261 \$44.75

Newton's Laws

Learn all about the ingenious Sir Isaac Newton's laws of motion which are the basis of classical mechanics that still describe most everyday life situations. Observe effects of kinetic and potential energy and see first-hand how energy is transformed from one form to the other. Build 8 working models such as a ballistic catapult, a gravity fan, a collision car, a moving cabin, a balloon powered plane and a dragster. You can find easy-to-follow building instructions for all models either online or in the booklet included.

730831 \$71.15



Candy Claw Machine - Arcade Game Maker Lab

Experiment to develop your motor skills and engineering chops to conquer this awesome STEM challenge. Build a working model of the classic claw machine — that enticing, sometimes frustrating, and always fun arcade game in which you try to grab prizes from inside the machine with a remote-controlled claw in a limited amount of time. Cranks, gears, and belts move the claw arm left and right, and forward and back. Hydraulic levers move the arm up and down, and open and close the claw. A spring-loaded trap door shoots the collected candy out at you if you manage to succeed. Experiment with three different types of claws (pincher, scoop, and three-pronged). Learn about hydraulics, levers, gears, belts, linkages, end effectors, and more. Refill your machine with your own treats and prizes for long-lasting fun.

735605 \$66.90



A. Work, Power and Simple Machines Flip Chart Set

The set features 10 double-sided, laminated charts, each 12" x 18" and spiral-bound on a durable, free-standing easel. Side 1 of each chart features a graphic overview of topic while Side 2 serves as "write-on/wipe-off" activity chart. Also includes Activity Guide featuring copy-masters and exercises.

Set Includes the following 10 Charts:

- What is Work?
- Power
- Measuring Work & Power
- Machines & Work
- Mechanical Advantage & Efficiency
- Simple Machines - 1
- Simple Machines - 2
- Simple Machines - 3
- Simple Machines in the Body / Compound Machines
- Vocabulary Review

731822 \$59.95



B. Forces and Motion Flip Chart Set

Double-sided, laminated charts, each 12" x 18". Includes the following 10 charts:

- Motion - Speed & Velocity
- Acceleration
- Momentum
- Force
- Friction
- Gravity
- Newton's First Law of Motion
- Newton's Second Law of Motion
- Newton's Third Law of Motion
- Vocabulary Review

731820 \$59.95

C. Energy - Forms and Changes Flip Chart Set

Double-sided, laminated charts, each 12" x 18". Includes the following 10 charts:

- Introduction to Energy
- Potential Energy
- Kinetic Energy
- Forms of Energy
- Energy Transformation
- Conservation of Energy
- Heat & Heat Technology
- Nonrenewable
- Renewable
- Vocabulary Review

731821 \$59.95





Classroom Olympiad Part 1

Let the games begin! Classroom Olympiad is designed to get you and your class started on classroom science activities that will enhance your curriculum. Each event is designed to encourage cooperative learning and foster an understanding of the scientific method. This kit supplies you with materials suited to demonstrate each event described in the manual: aerodynamics, car race, Cartesian divers, domino event, egg drop crate, regatta, rubber band catapult, suspension bridge, sky's the limit structures, and slow roller. Teams succeed by trial and error — you'll see team spirit and healthy competition develop as important scientific principles are learned.

SB31527M \$217.25



Classroom Olympiad Part 2

More great games! Keep the spirit of Olympic competition alive as your students learn the Scientific Method and cooperative learning skills. Ten new events: sailing; fettuccine physics; estimation guesstimation; shadow box; air cannon; marble trampoline; balloon bomber; pencil pendulum; and battery-powered car.

SB42632M \$356.95



Inertia Apparatus

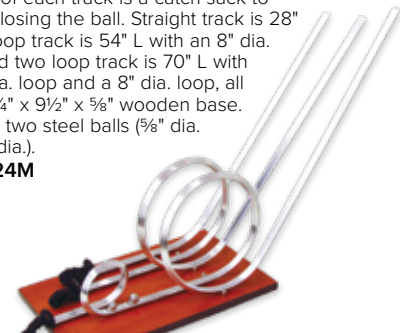
The plastic ball rests on the card — when you pull back the spring, the card shoots forward, but the ball returns to its perch on the post. This device illustrates the effect of inertia. To the observer, the ball seems not to have moved at all. Kit contains: plastic ball, stiff card, injection molded plastic base, support post with cone-shaped depression, hardware to attach post and spring to base, and instructions.

731496 \$28.25

Loop the Loop Triple Track

Understanding the principles of physics that occur on a roller coaster has become easier. This triple play apparatus consists of three tracks — one straight down, one with one loop, and the third with two loops. All three have different straight-up track lengths. At the end of each track is a catch sack to prevent losing the ball. Straight track is 28" L, one loop track is 54" L with an 8" dia. loop, and two loop track is 70" L with a 3½" dia. loop and an 8" dia. loop, all on a 15¾" x 9½" x 5/8" wooden base. Includes two steel balls (5/8" dia. and 3/4" dia.).

SB48324M \$103.15



Bicycle Wheel Gyroscope

Dramatically demonstrate angular momentum, torque, and gyroscope precession with this solid rubber, 20" dia. bicycle wheel. Students find themselves personally involved as they try to move the wheel's axis of rotation. The aluminum handle is equipped so the wheel can be suspended from a string. Weights can be hung from the handle to investigate gyroscopic precession. This apparatus will grab students' attention as they learn about the world of rotational physics. Includes teacher's guide.

SB21409M \$119.55



Pendulum Clamp

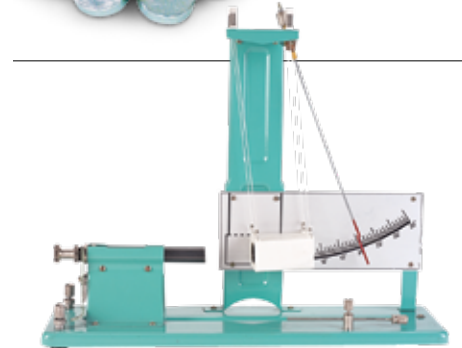
A quick and easy way to create a pendulum just about anywhere. Clamps securely to any vertical shaft under 1" dia. Included in the set are three bobs, one each of brass, pine, and steel. There are three anchor points on the clamp, allowing three pendulums to be studied simultaneously!



Hooke's Law Apparatus

Consists of a base, millimeter scale with mirror sticker, mounting rod, spring hanger, spring, indicator, and weight hanger. The unit as supplied is sufficient for a variety of experiments concerning Hooke's behavior and harmonic motion. Includes five 20 g slotted weights and instructions.

SB16580M \$57.75



Ballistic Pendulum Apparatus

Unit uses a nylon pendulum with a tapered rubber insert. Both pendulum and base have leveling screws. Spring-loaded gun has a self-locking trigger and a rubber bumper to prevent damage on impact. The scale is marked in degrees and is registered by a counter weighted needle that remains in place at the height of the arc.

SB21275M \$94.95



PHYSICAL SCIENCE

FORCE & MOTION



SciQuest® Motion Kits

Explore the fundamental science concepts of motion using a hands-on inquiry approach. This SciQuest® kit will add meaningful and enriching teaching opportunities for your students. Investigations include velocity and accelerated motion, simple periodic and uniform linear motion, and periodic motion of a pendulum. Includes teacher's guide.

Motion Multi-Group Kit. Contains enough materials for six work stations.
SB51747M \$465.65

Motion Demonstration Kit. Contains enough materials for one work station or a classroom demonstration.
SB51745M \$124.00

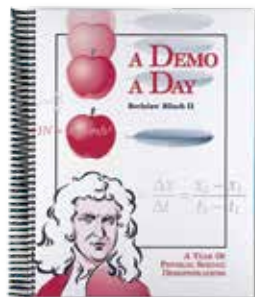


SciQuest® Forces Kits

Explore the fundamental science concepts of forces using a hands-on inquiry approach. This SciQuest® kit will add meaningful and enriching teaching opportunities for your students. Investigations include force couples involving "action and reactions," sliding and rolling friction, and centrifugal and centripetal forces. Includes teacher's guide.

Forces Multi-Group Kit. Contains enough materials for six work stations.
SB51743M \$539.90

Forces Demonstration Kit. Contains enough materials for one work station or a classroom demonstration.
SB51741M \$121.40



A Demo a Day for Physical Science

By Borislav Bilash II. 350 pages, 8½" x 11". Spiral-bound. Nearly 200 demonstrations in physical science to engage and enlighten students. Each activity is designed in an easy-to-follow, concise format, including application, theory, materials, safety precautions, procedure, chemical disposal information, and references where available. Concepts covered include: waves, sound, and light; Newton's laws of motion; electrical charges and currents; force and mass; heat energy; properties of matter; work, power, and simple machines; atomic theory and bonding; classification of matter; energy and motion; magnetism; and the nature of a gas.

SB28726M \$70.00

Nasco Rubber Band Cannons Unit

Students experiment with variables (angle, force, size, and distance) and record data using rubber band cannons. Each unit includes enough materials for a class of 30 students: 10 rubber band cannons (one for every three students), set of three sizes of rubber bands (1-lb. box each of small, medium, large), one target for competition, 10 tape measures (one for every three students), 10 sets of student team data sheets (one set for every three students), and a teacher's guide. Extra rubber band cannons may be purchased separately.

TB16225M \$372.45

Rubber Band Cannon Only.

TB16185M \$30.25



Acceleration Timer (DC)

A battery-operated timer designed for portability; can easily be clamped to a bench top or ring stand for recording objects of varying speeds. Slow the motor speed down to one half speed by inserting the enclosed aluminum rod in place of one battery. Useful for measuring small changes in velocity. Includes assembled motorized striker, carbon discs, ticker tape, aluminum rod, and instructions. Operates on two 1.5V "D" batteries (not included).

SB19009M \$66.45

Ticker Tape Timer Paper. Ticker Timer Tape Paper to be used with Ticker Timers. 50 m roll of paper tape, 15 mm wide. Works with most ticker timers.

2193M \$10.80

Carbon Paper Disk. 50mm Carbon paper discs to be used ticker timers. Comes in a box of 100. Refill for (SB19009M) Acceleration Timer (DC).

2194M \$10.85



Happy/Sad Ball Kit

Two rubber balls that look, feel, and squeeze the same — but try bouncing them! These intriguing inelastic and elastic collision balls are popularly called "happy and sad." One ball rebounds normally while the other is as bounceless as a piece of clay! Instructions included.

731368 \$12.35





Force Meters

The unique 8.5 Force Meter/Spring Balance means that they not only weigh suspended objects but in addition, using the extended rod, can also measure the force of pushing or pulling an object. They are colour coded, calibrated in grams and Newtons and have a clear flat area on the rod so you can, using a dry wipe marker, create your own scales. An instruction and ideas sheet is included.

731984	250g	\$13.30	731990	2kg	\$13.30
731986	500g	\$13.30	731992	3kg	\$13.30
731988	1kg	\$13.30	731994	5kg	\$13.30



Memory Force Meters

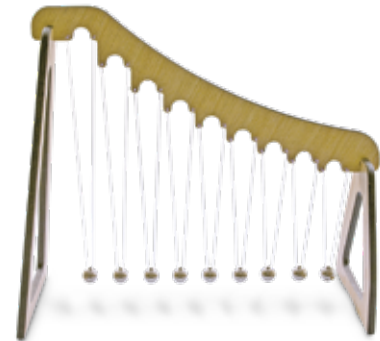
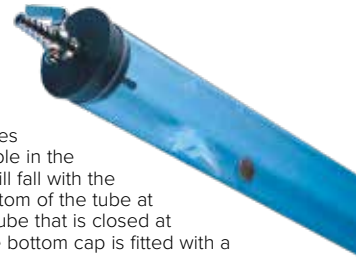
Measures force by pushing or pulling an object. Record the measurement using SI Manufacturing's innovative memory ring. Calibrated in both Newtons and grams. The clear plastic tube allows students to see the action of the spring.

77786	1 kg	Beige	\$6.70	77789	3 kg	White	\$6.70
77787	2 kg	Red	\$6.70	77790	5 kg	Yellow	\$6.70

Free Fall Tube

Students may expect that lighter objects experience a lesser acceleration than heavier objects. What the students overlook is the action of aerodynamic force, which counteracts the gravitational influence. By evacuating air from the Free Fall Tube, the aerodynamic forces can be virtually eliminated as a variable in the demonstration. As a result, objects will fall with the same acceleration and reach the bottom of the tube at the same time. Consists of a plastic tube that is closed at each end by a vacuum-tight cap. The bottom cap is fitted with a stopcock for air evacuation.

SB23861M \$91.85



Pendulum Wave

Nine pendula, each having a two-line mount, vary from slightly fewer to slightly greater than 20 swings every 20 seconds. With a simultaneous start, the bobs make a very captivating wave-like parade that shows all the possible phase relationships before returning to unison and starting over again. The rigid interlocking frame (21½" W x 18½" H) provides offset sharp edges to support each pendulum.

SB51279M \$165.35



The Hoberman Sphere™

Combines mathematics, science, and technical education into a magical motion of surprising simplicity, beauty, and fun. Its system of polymer links expands and contracts almost effortlessly, changing in volume 30 times. A great tool for teaching physical science and technical education. Expands from 9½" to 30".

TB18334M \$50.25



PHYSICAL SCIENCE

NATURE OF LIGHT & COLOUR



Colour Paddles

Transparent 6" paddles in six colours with three textures demonstrate the principles of colour mixing. Set of 18.

731740 \$9.25



Acrylic Colour Filters

High-quality acrylic filters in red, green, and blue. Ideal for use with the overhead projector to demonstrate that the colour of a material depends upon the colour of the light it is capable of reflecting, and the colour of the light incident upon its surface.

SB14384M \$5.95

Newton's Colour Disc

For demonstrating that white light is composed of the seven colours of the spectrum by rotating a disc with the seven colours. The seven-coloured metal disc is attached to a pulley mounted on a metal stand driven by a belt with the help of a hand driven wheel.

733486 \$67.55



Spectrum's Sound, Light & Optics Kit

This kit offers materials for multiple activities investigating sound, light and optics. Each kit includes LED light devices, concave and convex mirrors, prisms, colour paddles, tuning fork sets, and a wave demonstration slinky. All in a plastic storage tote. Ideal for 20 - 30 students.

730679 \$249.92



Light Energy Kit

Help your students to understand the properties of light energy with this kit. 18 activities, including light transmission, light theory and colour, light sources, reflection, refraction and diffraction of light. Teacher's guide included.

732634 \$188.35



SciQuest® Intermediate Level Multi-Group Kit Light

Specific concepts investigated relate to: how we see opaque and transparent objects; properties of transparent, opaque, and reflective materials; black, white, and colour formation; reflection of light, images formed by reflection, reversal of images formed in a plane mirror; and properties of convex lenses, determination of focal length, formation of real images, and the "pinhole" lens effect.

11 Investigations: Typically a minimum of nine class sessions required to complete all activities. Teacher's guide included.

SB16723M \$284.55



Colour Mixing Demonstration

Perfect for demonstrating colour mixing with the addition of the three primary colours: red, blue, and green. The brightness of the three colours can be controlled by individual switches. Hundreds of colour combinations are possible. Measures 4 1/8" L x 3 1/8" W x 4 1/4" H with a 3" screen. Requires three "AA" batteries (not included) or connection to a power supply.

SB47548M \$66.00



LED Ray Box Kit: Reflection & Refraction

Covers reflection and refraction of light and the lens of the eye. This kit includes a three beam LED ray box with dual colour lights (red or white), a set of 7 prisms, a mirror, 10 dry erase activity cards and instruction guide. LED ray box requires 3 "AAA" batteries (not included).

730915 \$116.95



LED Ray Box

Three beam LED ray box with dual colour lights (red or white). Requires 3 "AAA" batteries (not included).

730714 \$49.95



PHYSICAL SCIENCE

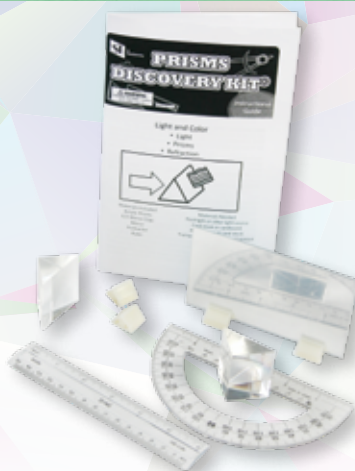
NATURE OF LIGHT & COLOUR



Prisms Discovery Kit

Discover the properties of light and colour and lead discussions with the class with this kit. Includes instructional guide.

730731 \$17.60



Perspex Prisms

Set of 7. Made from polished acrylic. Very high quality. All 25mm thick. Seven pieces in a strong storage box.

79340 \$53.40



Refracting Prisms

Product Number	Description	Material	Dimensions	Price
730291	Equilateral	Acrylic	25 mm X 25 mm	\$3.30
730290	Equilateral	Acrylic	25 mm X 50 mm	\$5.50
730283	Equilateral	Glass	25 mm X 75 mm	\$9.90
03885	Equilateral	Glass	25 mm X 100 mm	\$10.45
730288	Equilateral	Acrylic	25 mm X 100 mm	\$8.70
730287	Equilateral	Acrylic	25 mm X 125 mm	\$12.40
730282	Equilateral	Glass	25 mm X 125 mm	\$15.50
730286	Equilateral	Acrylic	25 mm X 150 mm	\$14.30
730285	Equilateral	Acrylic	37 mm X 37 mm	\$5.15
730281	Equilateral	Glass	37 mm X 37 mm	\$6.50
730280	Equilateral	Glass	50 mm X 50 mm	\$7.50
730284	Equilateral	Acrylic	75 mm X 10 mm	\$9.00
730292	Equilateral	Glass	75 mm X 10 mm	\$9.35
730293	Equilateral	Glass	63 mm X 10 mm	\$7.90
730294	Isosceles	Acrylic	68 X 68 X 90 X 20 mm	\$9.30



Plumber's Candle

White candles for general lab use. Designed to fit holder for optical bench experiments. 4 3/4" x 3/4".

SB14283M \$8.85 per doz.

Optics Set

Includes two 2-3/8" W x 1/2" H acrylic lenses (one each of double convex and double concave) and three mirrors (one each of convex, concave, and plane) in a wood storage box.

SB52561M \$30.30



Lens Demonstration Sets

For showing the most important types of lenses. Optically true with ground glass edges. Includes six lenses (double convex, plano-convex, double concave, plano concave, concavo-convex, and convexo-concave) arranged in a velvet-lined case. Available in two thicknesses.

50 mm Thick.

SB45490M \$28.70

38 mm Thick.

SB45489M \$29.50



Lenses Demonstration Set of 6

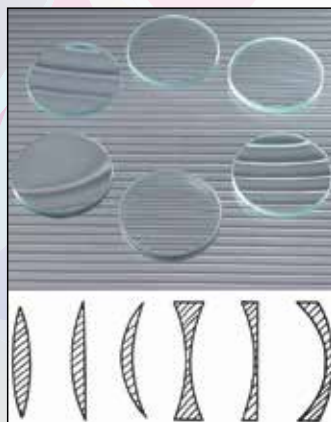
Contains plano-concave, convex-concave, double-concave, concave-convex, double-convex, and plano-convex lens types. Available in two different diameters, both with ground safety edges.

37.5 mm dia.

SB16449M \$12.35

50.0 mm dia.

S00169M \$14.40



Unmounted Optical Lenses

An excellent selection of unmounted lenses for use with optical benches and other studies in optics. All are made of high-quality optical glass, and have ground edges.

Double Concave Lenses.

Cat. No.	Diameter	Focal Length	Price
SB10474M	3.75 cm	10 cm	\$2.35
SB10475M	3.75 cm	15 cm	\$2.55

Double Convex Lenses.

Cat. No.	Diameter	Focal Length	Price
SB10476M	3.75 cm	5 cm	\$2.20
SB10478M	3.75 cm	15 cm	\$2.55
SB10479M	3.75 cm	20 cm	\$2.85
SB10480M	3.75 cm	30 cm	\$3.05



PHYSICAL SCIENCE

NATURE OF LIGHT & COLOUR



Light Box

Use to perform experiments in reflection, refraction, and colour mixing. The box has hinged sides with mirrors used for mixing colours and rays of light. An adjustable lens in the box is used to produce divergent, convergent, or parallel rays of light. The light box has grooves to accept slit plates or colour filters. Comes complete with eight acrylic plastic blocks (one rectangular, one semi-circular, one double concave, one equilateral 60 x 60 x 60 degrees, two right angle 90 x 60 x 30 degrees and 90 x 45 x 45 degrees, one circular, and one double convex), eight mounted colour filters, two slit plates, three mirrors (one plane mirror, one semi-circular, and one parabolic), and one set of coloured cards. Requires one 12V battery (not included). Spare bulb provided. Supplied in a thermocole box with place for each part.

SB37306M \$183.85

LED Light Box and Optical Kit

Designed for students to get hands-on experience on understanding the Laws of Refraction and Reflection. Includes a plastic three-ray, dual-colour (red and white) light box with three individual switch controls (on/off and one switch per color); 12 high-quality, clear acrylic prisms and lenses in different shapes and sizes; and nine activity cards for demo and experiments. Requires three "AAA" batteries (not included).

SB50013M \$93.00



**Best
SELLER**



Giant Water Prism

Throws a spectrum up to 78¾" (2 m) long! Made from ¼" acrylic, this 16" H right angle prism will withstand the abuse of the classroom. When filled with water, mineral oil, or another fluid, it will display a huge, brilliant spectrum the whole class can see. Prism was constructed utilizing the same techniques used for building aquariums and will not leak under normal use, rot, rust, warp, or become opaque. Integrated lid contains a hole for filling the unit. Works best with sunlight or a bright laboratory lamp. Includes instructions.

SB49112M \$69.65

Lumi Rod

Excellent tool for demonstrating the principle of fiber optics. The curled clear acrylic rod conducts light by internal reflection. A flashlight or laser pointer can be used for the demonstration. Includes an activity guide. 24" L.

SB49816M \$33.00



Mini Lens

5x magnifier, 0.8" diameter lens.

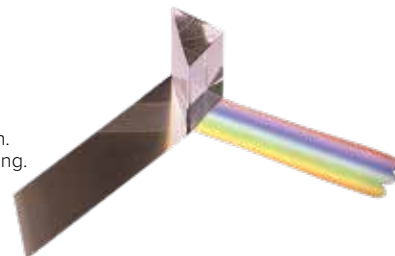
730914 \$0.35



Acrylic Right-Angle Prism

45 mm. Study refraction and reflection. Safe acrylic right-angle prisms. 1.75" long.

732638 \$5.25



Spherical Mirror Set

Set of 6 glass, spherical mirrors with back surface silvering. Includes three convex and three concave mirrors, each measuring 50 mm dia. Focal lengths are 50 mm, 100 mm, 200 mm, -50mm, -100 mm, and -200 mm.

SB47752M \$22.85



Refraction Block

Acrylic refraction block. Measures 115 mm x 65 mm x 20 mm. All sides polished.

SB28595M \$12.55



Set of 3 Acrylic Prisms

Highly polished acrylic equilateral prisms. Includes one each of 25 mm, 50 mm, and 100 mm prisms, all with 25 mm sides.

SB28596M \$26.25



Economy Optics Kit

An entire optics set at a great price! Includes everything you need to demonstrate basic principles of light and colour. Kit includes the following: double convex lens (glass, 38 mm dia.), double concave lens (glass, 38 mm dia.), plain lens (glass, 38 mm dia.), clear glass screen, two acrylic mirrors (square), white plastic screen, five cellophane squares in five colours, three lens/mirror supports, two acrylic prisms (equilateral, 25 mm x 50 mm), plastic graduated beaker, flashlight (two batteries included), candle, and activity guide with 20 experiments. Comes in a reusable storage box.

SB31097M \$65.25





Light Table

This light table provides an illuminated surface that's great for learning about shapes and colours. It is UL and CS listed and two AC bulbs are included. 24" x 24" x 24". 34 lbs. Made in USA. GreenGuard Certified. Lifetime Warranty.

732635 \$690.00

Big, Big Light Table

LED lighting system displays brighter, whiter and more uniformly distributed light, uses less electricity, and produces less heat. They're even waterproof! Constructed in beautiful birch plywood with natural UV finish. The LED lights are UL listed in USA and Canada and guaranteed to last for 50,000 hours. 42" x 24" x 25".

77945 \$1,400.00

Table Top Light Box

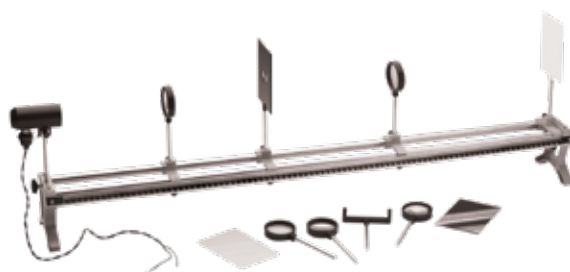
Light up a child's creative powers with this light box. Objects reveal their intrinsic attributes under the brightness. Anywhere there is a horizontal surface, set the light box down and watch creative minds light up. UL and CSA listed. Two AC bulbs and pre-school safe extension cord included. Made in USA. GreenGuard Certified. 24½" x 24¼" x 6". Lifetime Warranty.

732637 \$590.00



PHYSICAL SCIENCE

NATURE OF LIGHT & COLOUR



Optical Bench Set

Designed for basic geometric optics experiments, including imaging by lenses and mirrors. The optical elements are mounted in protective frames with mounting rods for easy alignment, and the four captive riders have an index mark and set screws to secure the rider and optical elements without disturbing their alignment. The lightweight and precise parallel bar optical bench with scale measures 37¾" x 4¾" x 4¾". Includes a prefocused illuminator with a 12 V/6 W incandescent lamp, four 2" dia. lenses, two mirrors, one object diaphragm, two screens, and manual. Requires a 12 V/0.5 A power supply.

SB43479M \$157.45



Mirror Pack

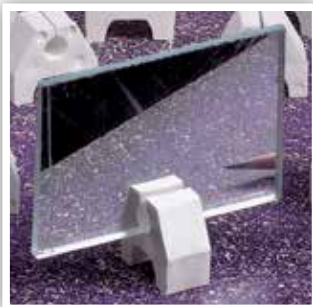
Handy pack of flexible plastic mirrors for use in all types of reflection and symmetry work. Pack of 12 double-sided mirrors come in three assorted sizes: 7½" x 6", 4" x 3", and 3" x 2". May also be cut to different sizes with scissors.

SB23588M \$31.00

Acrylic Mirror Pack of 10

Highly reflective, 4" x 5" rigid acrylic mirror. 1/8" thick.

SB26049M \$30.95



Mirror Clips

Made of durable PVC plastic, these mirror supports are designed for added stability. Use them in pairs to hold long rectangular mirrors. Pkg. of 36 mirror clips.

78330 \$9.95



Plastic Mirror

Single-sided plastic mirror. 7.5 cm x 12.5cm (3" x 5").

730917 Single \$1.75

730918 Set of 5 \$7.90



Plastic Mirror

Double-sided plastic mirror. 6 cm x 8.5 cm (2.4" x 3.4").

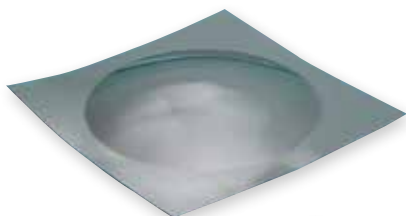
730916 \$0.95

Mirror Packs

Ten concave/convex mirrors: flexible, plastic, ideal for use in all types of reflection and symmetry work.

Double-sided mirrors cut easily with scissors. 4" x 4".

SB28627M \$15.15



Unmounted Plane Mirrors

Flat, silvered glass mirrors for demonstrations and experiments in optics. Pkg. of 12 mirrors.

SB16721M 10 cm Square \$35.00



Plastic Concave/Convex Mirrors

10 x 10 cm. Set of 10.

78318 \$16.50

Plastic Mirrors

5 x 7 cm. Set of 4.

78324 \$5.95

10 x 15 cm.

78322 Single \$2.75

Plane Mirror (Glass)

10 x 10 cm.

78326 Single \$4.95

4 x 15 cm

78328 Single \$3.30



MIRROR PACKS



PHYSICAL SCIENCE

NATURE OF LIGHT & COLOUR

Quantitative Spectroscope

Reveal the hidden nature of colour and visible light with this durably constructed, economical spectroscope. Begin investigating bright line spectra to unveil the atomic origin of light the instant you pick up this hand-held spectroscope. Contrast the differences between gas discharge (fluorescent) and incandescent lights. Discover the workings of diffraction gratings and how they separate white light into its component colours. Measure the wavelengths of visible light from 4000-7000 Angstroms with the precision of ± 50 Angstroms using the built-in scale. Instructions review the historical aspects of light theory, diffraction gratings, and provides suggestions for numerous experiments to help you unlock the world of visible light.

SB33518M \$13.35



Project Star

Precision Spectrometer

Now students can see absorption lines in the sun's spectrum with this spectrometer developed at the Harvard Center for Astrophysics' Project STAR. With actual wavelength measurements and equivalent energies in electron volts, this tool enables students to identify different elements in various light sources, such as fluorescent lights, incandescent light bulbs, gas tubes, sodium or Mercury vapor lights, etc. Light pollution can be studied by checking yellow street lights to see if they are high- or low-pressure sodium lamps. The spectrometer comes with a strip of film that includes the slit and a scale from which a colour may be identified by wavelength in nanometers or photon energy in electron volts. Durable plastic construction. Recommended for astronomy, chemistry, physics, physical science, and earth science from high school to college.

SB26055M \$60.65



C-Spectra® -

An Instant Spectroscope

Use it to view the visible spectrum, line spectra from spectrum tubes (such as hydrogen, helium, etc.), and to do flame tests of various metals. Because of the holographic nature of C-Spectra®, every segment contains the ability to produce the same pattern. Thus, it can be cut into small pieces convenient for classroom use. When cut into $1\frac{3}{4}$ " squares, each 8" x 10" sheet provides approximately 26 pieces.

SB23811M \$36.15 per sheet



Spectrum Tubes

Use for the classic demonstration of spectral lines. Each tube has its own characteristic spectrum when energized before a spectroscope. These tubes acquaint students with the spectra of common gases in their pure form as well as for demonstrating wavelength. The glass tubes are 25 cm long with the capillary portion about 10 cm long. An electrode is sealed in each end and attached to a metal end cap with a loop for convenient hookup to wire connections.

SB44679M Hydrogen
SB44681M Helium
SB44682M Nitrogen
SB44683M Oxygen
SB44684M Water Vapor
SB44685M Air
SB44686M Carbon Dioxide
Each \$55.75

SB44687M Neon
SB49241M Deuterium
SB49245M Krypton
SB48893M Argon
SB48894M Xenon
SB48896M Mercury
SB49251M Chlorine



Spectrum Tube Power Supply. This power supply provides safe and reliable operation for spectrum tubes of approximately 10-1/4". The unique design supplies a voltage that prolongs the life of the spectrum tubes. Specially designed sockets eliminate electrical shock hazards. The unit operates at 120 V at 60 Hz.

SB43813M \$244.50

Student

Spectrometer

Economically priced but capable of performing most experiments, including spectras, angle of prisms, refractive indexes, etc. Features a heavy base with 170 mm diameter circle, divided 0 to 360°, which rotates independently and has a locking screw. Other features include: fixed collimator with adjustable axis, objective lens with focusing system, and variable aperture slit; prism table with three leveling screws and engraved lines for prism placement in experiments; movable telescope featuring a set screw, fine motion screw, objective lens, adjustable axis, and a Ramsden eyepiece with cross-wires and locking ring for focus lock. Telescope pillar carries vernier scale for accurate measurements. Comes complete with prism clamp, grating holder, tommy bar for axis adjustment, and instructions.

SB39427M \$448.55



Chemiluminescence

Explain and view chemiluminescence! Observe how luminol is converted to an excited state in the presence of an oxidizer such as hydrogen peroxide. As the excited state molecule decays or returns to the ground state, energy is produced as light. Includes 100 ml of luminol solution and 50 ml of 6% solution of hydrogen peroxide.

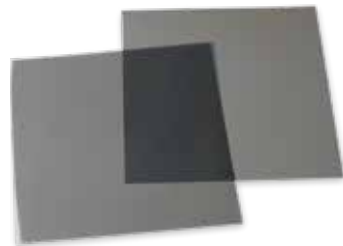
SB43576M \$43.15



Replica Diffraction Grating Slides

Excellent for demonstrating the spectrum from various light sources. Gratings are mounted in a 2" x 2" slide frame for easy handling during classroom experiments. 13,500 lines per inch. Pkg. of 25 slides.

SB26512M \$19.85



Polarizing Film

Twist light to amaze your students! Contains two sheets of high-quality polarizing film. Can be used to turn clear film opaque, or opaque film clear. Shows the properties of electromagnetic waves in a simple way.

SB47665M \$27.65



Smartphone Spectroscope

Give any smartphone the ability to identify and characterize substances! With an adjustable clip that will fit any smartphone and a downloadable app, make measurements in real-time. Calibrated with an adjustable slit and zoom.

SB53274M \$98.55

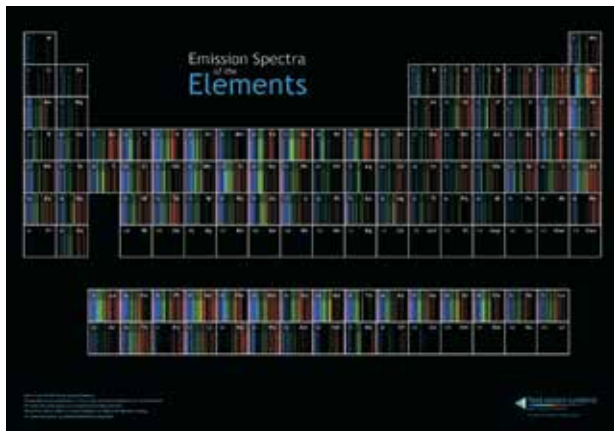


Polarizing Film

Effective yet economical tool for demonstrating polarization of light. Each 3" x 3" piece is mounted in a 2" x 2" slide holder. Includes 10 pieces of film, 10 slide holders, and instructions.

SB49820M \$55.75





Periodic Table of Spectra

High resolution, brilliantly colored periodic table poster clearly shows the detailed emission of spectra for each of the elements, allowing students to see that each element has its own spectral fingerprint. The 1.5 mil laminated poster is 24" x 36".
SB52402M \$52.75



Lights and Optics Flip Chart Set

The set features 10 double-sided, laminated charts, each 12" x 18" and spiral bound on a durable, free-standing easel.

Includes:

- Introduction to Light
- The EM Spectrum
- Transmission of Light
- Light & Colour
- Interactions with Light
- Reflections & Mirrors
- Refraction & Lenses
- Light & the Human Eye (Vision)
- Light in Technology
- Vocabulary Review

731824 \$59.95

Wavelength and Spectrum Demonstrator

Discover how colors affect wavelengths and learn why red is chosen for "stop" in traffic signals. Features 11 different color and wavelength LEDs mounted in a 12" L x 1-3/16" dia. metal tube with a 3-15/16" dia. metal base. Light up each LED individually with the rotary switch on top. Color and wavelengths are marked on the tube. With a handheld spectroscope (not included), the spectrum produced by various colors can be studied.

SB48327M \$110.55



Reflection and Refraction Demonstrator

Effectively demonstrates the laws of reflection and refraction. The 6-5/16" dia. acrylic water tank has a 360° scale and a movable arm with a laser activated by a push button. Thumb screws on side of laser harness can be adjusted to finely position laser beam. Requires two "AAA" batteries (not included). Includes activity guide. NOTE: This product emits laser light. Max. output power <1mW. Wavelength: 630-680 nm. Class II laser product.

SB52562M \$114.00



Kaleidoscope Making Kit

Build your own Kaleidoscope, then create different patterns by placing different objects in the viewing chamber.

56571 \$22.50

Spectroscope Kit

Students will appreciate the prismatic qualities of sunlight by using the 2.5cm diameter diffraction grating spectroscope.

56576 \$7.55



Flashlight

Handy, portable battery flashlight has durable plastic outer casing. Exclusive diamond reflector provides a wider beam of light than most ordinary flashlights. Requires two "D" batteries (not included). No colour choice.

SB13626M \$3.45

Pack of 12 flashlights.

SB42623M \$29.75

Batteries. Size "D". Pack of 2.

SB10826XM \$8.15

Flashlight Set

Set of two 6" long flashlights to fit in pocket, briefcase, purse, etc. Complete with wrist band. Requires two "AA" batteries (included). Colours may vary.

SB31462M \$9.00



Educational Diffraction Gratings

Three diffraction gratings mounted on the same slide 100, 300, and 600 lines per mm. Individual gratings measure 1/2" x 3/8". Slide measures 3" x 1/4".

SB45751M \$37.45



PHYSICAL SCIENCE

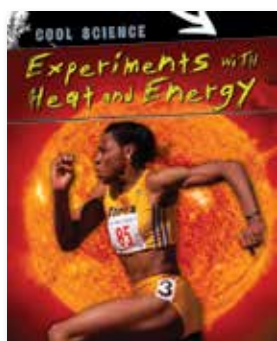
NATURE OF HEAT



Double-Walled Calorimeter

A calorimeter with a double-walled cover will minimize heat loss. The inner and outer vessels are made of aluminum. The calorimeter has a stirrer and support for the inner vessel. Inner vessel capacity: 300 ml.

SB13895M \$18.85



Experiments with Heat and Energy

While we can certainly feel the effects of heat and energy, understanding them as forces can be difficult. This book helps young scientists draw their own conclusions through a series of practical exercises that are all spectacular. 32 pages.

733390 \$13.25



Ice Melting Set

An interesting method of proving the difference in heat conductivity in different metals. Place an ice cube on each of the two black blocks at room temperature and watch as one ice cube melts faster. The black blocks look the same but one is made of aluminum and the other is made of plastic foam. Set shows how aluminum is a good conductor of heat, while the foam is not.

731404 \$37.15

Radiation Can Set

A simple way to study absorption, emission, and Newton's Law of Cooling. Students can determine which can is a better emitter and which is a better absorber. For absorption experiments, fill with cold water; for emission experiments, fill with hot water. A hole is provided in the top of the can for thermometers (not included) for measuring changes in water temperature.

SB26244M \$26.65



Pulse Glass

Designed for demonstrating that vapor pressure increases when temperature increases. Apparatus consists of two glass bulbs which are connected with a glass tube and contain a coloured, volatile liquid. Holding one of the bulbs in your hand causes the evaporation of a portion of the liquid, which forces the liquid into the other bulb. CAUTION: Only operate using hand heat.

SA09087M \$13.85



Convection Apparatus

Designed for studying convection currents in the air, this apparatus consists of a metal box with glass front and two acrylic chimneys mounted on the top. Convection currents visible through the glass front are produced by a candle placed under one chimney and a smoke-producing material held at the mouth of the other chimney.

S00185M \$47.95



Specific Heat Specimen Set

Set of 4 consisting of aluminum, copper, stainless steel, and zinc. Each cylinder is 19 mm in diameter. The length of the cylinders is such that all are of an equal weight, since their masses are equal, their relative heat capacities are directly proportional to their specific heat. Each cylinder has a hook so it may be lowered into a calorimeter.

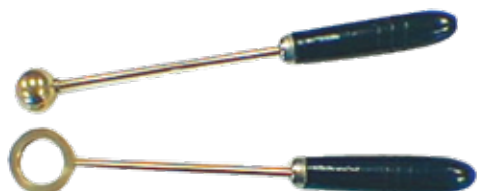
SA05697M \$34.00



Compound Metal Bar

Two metals (nickel and stainless steel) of different heat expansion coefficients welded together and mounted in wooden handle. Demonstrates unequal expansion of different metals by bending when heated.

03669 \$10.00



Ball and Ring

Brass ball, 3/4" dia., fits into brass ring. Ball passes freely through ring when both are at same temperature. After application of heat, as little as 100° C change in temperature, the ball cannot pass through the ring until it cools or until the ring is heated.

03671 \$22.35



Heat Conductometer

Demonstrates the conductivity of five metals: silver nickel, steel, aluminum, copper, and brass. Hub is stationary, and is mounted on a plated steel rod with wooden handle.

03670 \$22.35



Gas Convection Apparatus

For studying convection currents in the air.
Size: 20 x 10 x 10cm. Comes with instructions.

03605 \$55.05

036051 Chimney only **\$5.30**



Liquid Convection Apparatus

When partially filled with water and heated, convection currents occur.

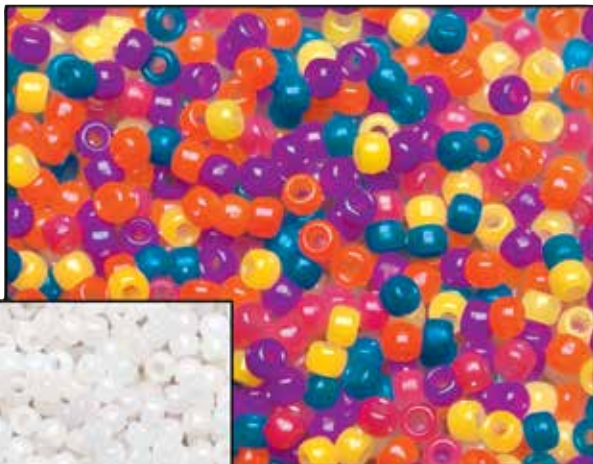
48838 \$45.00



Solar Bag

When set in the sun, this giant balloon collects enough solar energy to float. The thin, black plastic tube holds over 200 cubic feet of air and measures 50 ft. L x 29 in. dia.

67924 \$38.00



Before Sunlight

Energy Beads

These beads change colour, using the power of the sun. Package includes 100 beads and great science experiment ideas, including testing the quality of suntan lotions and sunglasses.

67922 \$5.95



Conductivity Bars

Although all metals conduct heat, they do so at different rates. This set, aided by liquid crystal thermometers, demonstrates this. Contains steel, brass, aluminum, and copper specimens. Enclosed in a plastic housing.

SB46988M \$53.55

Radiometer

Partially evacuated glass bulb contains spinner with four vanes, blackened on one side, silvered on the other. Turns 3,000 revolutions a minute in sunlight. Will also turn under an incandescent lamp (100 watts or more). The stronger the wattage, the faster it will turn. Detects and demonstrates energy of heat radiation.

56852 \$19.95



Heat Pack

Contains a super saturated solution of water and sodium acetate. Snapping the metal disc creates a chain reaction, causing the solution to crystallize. The crystallization process gives off heat. Packs can be recharged back to the liquid state by immersing in boiling water for 10–15 minutes and allowing it to slowly cool. Includes teacher's guide. 4" x 4".

SB47058M \$9.95

IR Thermometer

Simply hold the IR gun, press the trigger, and aim the laser guide at the target. Results immediately appear in °C or °F on the large backlit LCD and are automatically held for seven seconds after the trigger is released. Auto power off. 9V battery operation (included). Range is -4°-518° F. Accuracy: ±6° F. Dimensions: 8" L x 3" W x 1¼" D.

SB40820M \$77.55



Hydrometer Jar

Made from borosilicate tubing. Features ASTM calibration mark. Capacity: 1,000 ml. Maximum hydrometer length: 385 mm.

SB52589M \$62.45

Heat Transfer Kit

Allow students to observe heat transfer under different conditions by measuring the temperatures of the insulated containers before and after connecting them with the metal bar. Includes two insulated containers, two thermometers, metal bar, and instruction manual/teacher's guide.

76884 \$45.30



PHYSICAL SCIENCE

NATURE OF LIQUID & GAS



Osmosis & Diffusion Kit — Lab-Aids® No. 22

This kit allows students to observe diffusion through a membrane in two directions at the same time. In addition, they can observe the selective permeability of a membrane — some substances can pass through a membrane and others cannot. Complete for 30 students.

SA08212M \$193.95



Harbottle

A simple, clever device to introduce air pressure. Simply place the balloon into the opening of the bottle and stretch the mouth of the balloon over the mouth of the bottle. Blow into the balloon, and, once fully inflated, stopper the bottom hole of the bottle. Amaze your students when the balloon stays inflated — no twisting or tying required! Fill the balloon with water to demonstrate the power of pressure! Makes an excellent visual aid for discussing pressure and its real-world applications, including vacuum cleaners, pumps, flight, weather, and even how we breathe! Includes 5" diameter glass bottle, rubber stopper, two balloons, and teacher's guide with information and activities.

SB51121M \$66.55



Overflow Can

Aluminum can designed to determine the volume of a body to calculate density, specific gravity, or for proving Archimedes' Principle. 8" dia. with flared top edge and angled spout. 120(H) x 65(D) mm.

15408 \$11.75



"Charles' Law Mechanics of Gas" Can with Lid

Demonstrate the forces of air pressure by boiling water in the can and allowing to cool. See the can get "crushed" right before your eyes. Metal can with lid, 1¼" opening.

SB28561M \$23.45 ea.



Dialysis Membrane Tubing

Made of seamless, regenerated cellulose. An excellent membrane designed for laboratory dialysis and routine osmosis/diffusion experiments.

Flat Width 1"

50 ft. long.

SB09780M \$39.75

100 ft. long.

SB09781M \$73.55

Flat Width 1¼"

50 ft. long.

SB09782M \$51.15

100 ft. long.

SB09783M \$81.85

Fire Syringe

Turn on to Boyle's Law with this explosive demonstration! As air compresses, the temperature increases and combustible material bursts into flames. Also is great for discussing adiabatic compression (rapid compression that raises air temperature) in diesel engines, the laws of thermodynamics and the resourcefulness of ancient people. The kit includes aluminum piston, Lexan® piston chamber, two custom O-rings, and instructions.

SB42045M \$23.65



Gas Law Apparatus with Temperature Gauge

Use this apparatus to experiment with the elastic properties of a measured quantity of gas. This unit makes the understanding of Boyle's Gas Law easy and helps to show the relationship between the pressure,

temperature, and volume of a gas that is constant. Simply twist the handles to compress the air and read the volume, temperature, and pressure from the scales. Repeat the process to confirm that the relationship stays the same.

SB45488M \$155.15



Boyle's Law Apparatus

This apparatus allows students to investigate the elastic properties of a gas enclosed in a calibrated airtight syringe by subjecting the confined gas to various loads. The syringe is built into a sturdy wood base. The wooden top is large enough to support arbitrary uniform weights such as books or bricks. A plot of pressure versus volume of gas gives a good approximation of Boyle's Law.

SB16604M \$26.75





Exclusive
KIT

Spectrum's Pneumatics/Hydraulics Kit

This kit offers materials for a variety of pneumatics/hydraulics activities. When using balloons and syringes, tubes and valves, students and teachers are introduced to pneumatics and hydraulics. This kit includes: 50 syringes (10 x 6 mL, 20 x 12 mL, 20 x 20 mL), 10 syringe holders, 1 balloon pack and pump, 10 meters of tubing with 10 straight and T connectors, 5 tee valves and 5 one-way valves. All in a plastic storage tote. Ideal for 20 - 30 students.

730683 \$129.92



Air + Water Power

Build your own models powered by air and water pressure to learn about the laws of physics. Construct 15 models including a truck, excavator, radar car, tank, antique car, helicopter, motorbike, backhoe, rocket car, forklift, roadster, propeller plane, grinder, and cutting machine. The water-jet propelled cars are a fun outdoor activity, while the self-contained hydro-pneumo powered models are fun both indoors and out. The 48-page colour instruction book included in this kit illustrates the step-by-step assembly of each model and related principles so that children learn through playing. 165 building pieces included.

733560 \$85.35



Syringes

Disposable, plastic syringes useful for various pneumatic/hydraulic activities.

08727 3ml \$0.75

08726 5ml \$0.90

20079 10ml \$1.15

20080 20ml \$1.30

09925 30ml \$1.65

Tubing Connectors

09901 Pkg. of 10 \$7.50

One-Way Valves (Non-return)

23162 Pkg. of 10 \$24.95

Three-Way Stopcocks (Tee Valve)

09905 Pkg. of 10 \$35.95

Syringe Holders with Adhesive Backing
For use with 10ml and 20ml syringes.

09909 Pkg. of 10 \$14.50



Tubing Tees

09903 Pkg. of 10 \$7.50

Two-Way Straight Valves

09907 Pkg. of 10 \$31.95

Extra-Large Syringe

68008 60ml \$3.00



CaddyStack™ Pump It Up with Pneumatics/Hydraulics Kit

Using balloons and syringes, tubes and valves, students and teachers are introduced to pneumatics and hydraulics. This set includes: 50 syringes (10 x 6 mL, 20 x 12 mL, 20 x 20 mL), 10 syringe holders, 1 balloon pack and pump, 10 metres of tubing with 10 straight and T connectors, 5 tee valves and 5 one-way valves. All in a CaddyStack™.

20068 \$149.92



Discovery Kits® Pneumatics

An excellent means for individual learners to explore with design & make projects in a variety of areas. Comes with 20-page guide with a variety of activities and models.

70022 \$44.65

20820 Guide Only \$3.50



Clear Plastic Tubing

Soft, flexible, plastic tubing compatible with pneumatics items and syringes listed.

05048 \$0.85/m

Magdeburg Hemispheres

Set of 2. A classic in teaching about vacuums! In a modern application of the famous 17th Century experiment, you can demonstrate the force of air pressure without a vacuum pump. 8.5cm diameter.

731414 \$8.95



PHYSICAL SCIENCE

DENSITY



Equal Mass Cylinder Density Set

Demonstrates the inverse relationship between density and length for cylinders of the same mass and diameter. The set consists of five cylinders (copper, aluminum, nylon, polyvinyl chloride, and polyethylene) all 12 mm (1/2") in diameter and range from 15 mm to 100 mm in length. Mass of each cylinder is 15 g.

SB15356M \$21.25



Density Identification Set

With this clever kit, students try to identify each of 12 different samples by determining their density. Each cylinder varies in size (volume) and density, but has the same diameter of 1/2". Lengths vary between 1-9 1/16" and 2 5/8". Includes: 12 of the most common materials, wood base, and instructions.

SB39210M \$71.85



Universal Hydrometer

Students can explore the ratio of the density of a chosen liquid to the density of water with this Universal Hydrometer. For specific gravity 700 to 2000.

735439 \$18.85



Density Cube Set

Here's a handy, economical set of 1 cm cubes in the following materials: aluminum, steel, brass, copper, acrylic, oak, nylon, pine, poplar, PVC. Experiment with mass, volume, density, buoyancy, specific gravity, and flotation. Instructions included.

48105 \$27.45

Set of 4. Copper, brass, aluminum and iron.

48022X \$15.00



Density Cubes Set of 24

Ideal for density experiments. 1/2 in., 1 in., and 1-1/2 in. cubes of 8 materials: acrylic, aluminum, brass, copper, nylon, polypropylene, PVC, and steel. Reference table shows the density values of each specimen.

SB53047M \$203.45



Drilled Ball Set

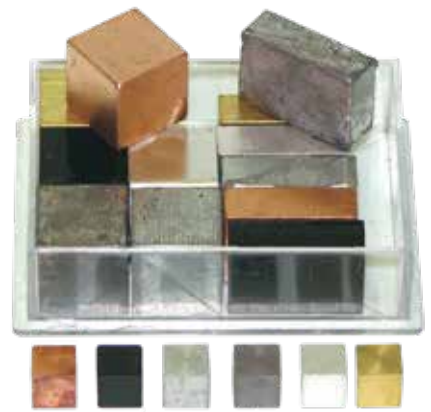
Ideal for collision and pendulum applications, this ball set consists of 14 balls of seven materials. Includes two balls each of aluminum, brass, copper, iron, lead, zinc, and wood. 1" each.

SB49320M \$86.35

Density Cylinder Set of 4

Copper, brass, aluminum and iron. 40 (L) x 10 (dia.) mm.

48030 \$29.00



Set of 18 Density Blocks

Excellent for experimenting with density and volume. Includes 10 mm cube, 20 mm cube, and 30 mm x 20 mm x 10 mm block of six metals: aluminum, brass, copper, lead, steel, and zinc.

SB45749M \$66.45



Density Cubes

Set of four 1" density cubes containing one each of nylon, acrylic, aluminum, and pine wood.

SB44474M \$21.75



12-Piece Mystery Density Set

This set of 12 samples represents two sets of materials (nylon and acetyl) that, while sharing similar physical appearances, represent differing densities. The set is meant to be used as an inquiry lesson in which students are asked to measure and graph the masses and volumes of all 12 pieces without the knowledge that the 12 samples actually represent two different substances. Proper analysis of the graph will point students to the conclusion that there are in fact two substances of differing densities. Use to introduce the concept of density; to reinforce the basic principle of graphing data as a means of data analysis; and to test students' abilities to properly collect dimension, mass, and volume measurements. Additional material may be needed. Ideas for supplemental activities are included.

SB47733M \$69.45



PHYSICAL SCIENCE

DENSITY

Exclusive
KIT



Spectrum Floaters, Sinkers & Water Investigation

Have your students use this kit to discover the different properties of materials that either float or sink. They can also investigate the properties of water. The kit includes: fishing floats, sinks, ping pong balls, washers, clay, sponges, clear tubing, squirt bottles, vials, thermometers, funnels, siphon, syringes and measuring cups.

732959 \$74.92



Floating Density Spheres

A set of six solid plastic spheres and all the materials needed for producing and using a density gradient. The spheres float at different levels in the gradient as a result of their different known densities. The densities of additional small material specimens (included) may be determined by dropping them into the gradient and noting which sphere they float alongside. Requires water and corn syrup, sugar, or salt (not included).

SB48430M \$34.00

STEM Sink or Float? Activity Set

Ahoy there! It's real STEM learning for kindergartners. Learn all about physics in a fun, colourful way! Pieces include two-piece submarine, plus 15 colourful weights, 2 balls, and a raft to bring investigations to life. Set also features ten detailed Activity Cards that cover all aspects of STEM, plus key science concepts of buoyancy, gravity, density, and more! Includes book of supplemental teacher material. Set features over 20 engaging, high-impact activities! Submarine measures 6" L x 3.5".

730266 \$48.90



Water Investigation Kit

Includes a siphon, 3 sponges, 2 funnels, clear tubing (2 sizes), a set of measuring cups, 3 squirt bottles, syringe, and 5 small medicine cups.

13288 \$36.92



Floaters & Sinkers Kit

Students will discover properties of materials that sink or float with this comprehensive kit. Includes fishing floats and sinks, ping pong balls, washers, plasticine, sponges, clear tubing, squirt bottles, vials, and a thermometer.

14632 \$44.92



Density Slope Classroom Set

This set guides students to discover the idea of density as a mathematical concept and that density is a constant for a given substance. Students will determine the mass and volume of four material samples and plot the data on a graph to find the constant. Set of 48 density specimens organized as 12 sets of four. A given tube contains specimens of a particular substance. Use this set to test students' abilities to determine length measurements, mass, volume, and density.

SB47734M \$155.15



PHYSICAL SCIENCE

NATURE OF SOUND



SciQuest® Sound Kits

Integrate supplemental experiments aligned with the Next Generation Science Standards with this interactive kit! Specific concepts are investigated to develop ideas about how mechanical energy converts to sound, how the use of resonating tubes and temperature can be used as a direct measurement, and how the characteristics of sound waves, frequency, wavelength, loudness, and the velocity of sound make an impact in discovering the world around us. Teacher's guide included.

Sound Multi-Group Kit. Contains enough materials for six work stations.

SB17861M \$388.05

Sound Demonstration Kit. Contains enough materials for one work station or a classroom demonstration.

SB19239M \$116.25

Ripple Tank for Overhead Projector

Great for observing propagation, reflection, interference and diffraction of waves. Includes adjustable vibrator, water tank, two baffles, and adjustable control knob. Needs one "D" cell battery (not included). Dimensions: 11-3/8" W x 13" L x 1 1/2" H.

SB42192M \$188.15



Singing Rods

Ideal for teaching about nodes and anti-nodes in standing waves. Includes 20" L rod, 30" L rod, bag of crushed rosin to lightly coat your fingertips, and teacher's guide.

SB50323M \$24.85



Resonance Bowl

Provides a hands-on demonstration of the behaviour of waves and frequencies. Just rub the copper handles, and the vibrations make the water surface ripple. Soon, water droplets shoot up, quickly becoming continuous fountain streams. Includes teacher's guide.

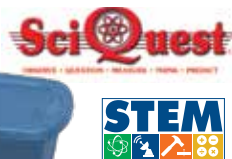
SB51123M \$217.25



Mini Ripple Tank

Modern technology has been used to completely update the Ripple Tank concept to provide a compact and elegant method of showing diffraction, refraction, reflection, and interference with none of the usual problems. White light source can be switched between constant illumination and strobe to give either moving or frozen images on the screen. In strobe mode, light source is synchronized to wave generator so that perfectly static patterns are displayed. Wave frequency can be varied, giving wavelengths in the tank that range from several centimeters to a few millimeters. Includes instructions.

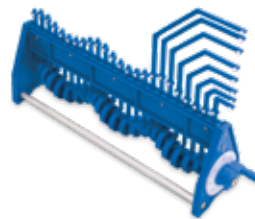
SB52404M \$419.00



Bell in Vacuum

Nature, of course, abhors a vacuum — and sound waves won't travel through one. As air is gradually pumped out of the jar, the bell becomes faint, then dies. Includes jar, vacuum plate with valve, rubber seal, bell system, and instructions. You need a vacuum pump and two "AA" batteries (not included). Bell may be removed for other vacuum experiments. The inside height is 8", and the diameter is 8". Includes bell jar, electric bell, base plate with seal, and instructions.

SB44677M \$155.15



Wave Model Demonstration

For demonstrations longitudinal and transverse wave motion. Consisting of a number of eccentric plastic discs supporting a series of plastic rods that are joined to a handle. On turning the handle, simulation of waves can be obtained on the rods. 18" L x 4" W x 12" H.

SB47549M \$87.65

Sound and Music

This kit introduces characteristics of waves. Students observe how sound waves travel by using a Slinky. Students also observe vibrations produced by tuning forks and the relative pitch produced by two different tuning forks. The musical scale is emphasized. The structure of the human ear is introduced.

732633 \$212.75



Bag O Beats

A set of percussion instruments including a set of triangles, maracas, rhythm sticks, sand blocks, tone block with mallet, cluster and wrist bells, finger cymbals, hand castanet and instruction booklet all in a drawstring bag.

44382 \$64.95



Boomwhackers®

8-Note Diatonic C-C' Set (Upper Octave).

The tubes are perfectly tuned to different musical notes, which are clearly marked on their labels. Whack almost anything to produce tones. Different surfaces produce different sounds, but always the same pitch.

67928 \$42.90



Laminated Sound Poster

Take a comprehensive look at sound waves as well as their characteristics, properties and uses. Poster is 23" x 35".

731055 \$29.95



Sound Chart Set

- 10 double-sided, laminated charts, each 12" x 18".
- Introduction to Waves
- Waves Length & Frequency
- Wave Interactions
- Sound Waves
- Aspects of Sound
- Doppler Effect
- Hearing Sound
- Musical Sounds
- Applications of Sound Waves
- Vocabulary Review





Tuning Fork Set

Set of 13 tuning forks with the frequency and scale letter stamped on each fork. Made of aluminum alloy.

731436 \$46.45

Tuning Forks

These chrome-plated tuning forks are ideal for viewing oscillation.

732630 Small (5") \$3.75

732632 Large (6") \$3.95

Aluminum Alloy Tuning Forks

Made of 3/8" x 1" bar stock with smooth, aluminum-turned handles approximately 1 3/4" long. These nonmagnetic tuning forks require no plating and will not rust or corrode. The scale letter and frequency is stamped on each fork. Accurately tuned within $\pm 5\%$ at 20° C. Lightweight, the forks weigh 1/3 that of steel forks. Class A-3, tuned to Physical Scientific (C-256).



Cat. No.	Frequency	Note	Price
SB14260M	100	---	\$8.85
06410	128	C	\$10.85
06415	256	C'	\$10.85
SB01312M	288	D'	\$9.65
SB14263M	320	E'	\$8.85
SB01313M	341.3	F'	\$9.65
SB14264M	384	G'	\$8.85
SB01314M	426.7	A'	\$9.65
SB01315M	480	B'	\$9.65
06420	512	C''	\$14.75
SB14267M	2048	C''''	\$8.85
SB14268M	4096	C''''''	\$8.85

Tuning Forks Set of 4. Includes the following frequencies and scale letters: 256, C'; 320, E'; 384, G'; and 512, C''.

SB16561M \$17.45

Tuning Forks Set of 8. Includes the following frequencies and scale letters: 256, C'; 288, D'; 320, E'; 341.3, F'; 384, G'; 426.7, A'; 480, B'; and 512, C''.

SB16562M \$33.15

Set of 8 Tuning Forks with Mallet. Includes Tuning Forks - Set of 8 (SB16562M, above) and Mallet (48868, below).

SB48580M \$29.00

7-Frequency Adjustable Tuning Fork

Weights adjust to deliver fine tones in C128, D144, E160, F170.7, G192, A213.3, B240 frequencies. Scale letters clearly defined on stem. Precision-grade aluminum. 8" overall length.

SB14269M \$21.55



Tuning Fork Activator

Protect your tuning forks as well as your desk from nicks and scratches. Made of solid rubber. Measures 2 1/2" long. Black.

SB39153M \$4.95



Mallet

1" dia. hard rubber ball, 1/4" wooden handle, length 8".

48868 \$5.05



Sound Meter

A small, hand-held unit that measures background sound level, traffic, and more. Two scales cover the 40-80dB and 80-120dB ranges. Decibel frequency weighting according to ANSI. Comes with a carrying case, 9V battery, and instructions. Accuracy: $\pm 3\text{dB}$. Simple to operate.

76894 \$139.60

Resonant Tuning Forks Set

This unit is designed to demonstrate the resonance of sound. It includes a pair of chromium-plated carbon steel tuning forks of 440Hz mounted on wooden resonance boxes. Includes a rubber hammer.

SA01604M \$99.00



Sound And Energy Kit

Encourage student creativity and hands-on exploration of basic science principles with this kit. Experiments include: Sound Waves, Speed of Sound, Making a Telephone, Frequency and Pitch, and Soundproofing. Includes: reproducible activity pages, activities, detailed illustrations, and a teacher's answer key.

732628 \$163.75

Wave Demonstrator Set

The 4-ft. Slinky Spring is ideal for demonstrating several fundamentals of wave motion. When the spring is extended to 30 ft., a lateral or longitudinal pulse can be observed in detail as it travels at the slower rate corresponding to low tension. By comparison, the longer and heavier 6-ft. helical spring demonstrates the effects of greater mass and of greater tension. Another interesting experiment is to join the two springs in line, stretch them, and observe the behaviour of a pulse from either end as it travels through the joint.

76892 \$28.00

4-ft. Slinky Spring.
08665 \$10.35

6-ft. Helical Spring.
SB13634M \$20.55



Tuning Fork Discovery Kits®

Learn how to use a tuning fork with multiple experiments outlined in a detailed teacher's guide. This kit goes through the basics of vibration, waves, frequency, interference and amplification of sound. Enough material for one group of students. Bowl colours will vary.

735599 \$16.45

Wave Demonstration Spring

This 3" diameter flat spring steel apparatus can make visualizing wave propagation much easier. The plated spring can be stretched across the room allowing the entire class to witness the wave traveling back and forth. (2.5" x 2.5" x 2.75"; 1 lb).

730313 \$10.10



PHYSICAL SCIENCE

ALTERNATIVE ENERGY



Motors and Generators

Electric motors and generators are in countless devices, appliances, and vehicles we use everyday. They are an essential technology in our modern world. With this kit, you can conduct 25 experiments to learn how an electric motor converts electricity into motion, and how an electric generator does just the opposite, converting motion into electricity. Experiment with magnets to learn about the force of magnetism, and how magnetic fields relate to electric current. Build simple circuits consisting of the motor or generator, wires, and a light bulb to learn about the flow of electricity. Learn about gears and drive-trains and how they work to effectively convert kinetic energy into electrical energy and back again. The full-colour, 48-page manual guides your experiments with step-by-step instructions.

733612 \$49.90



Solar Balloon Energy Kit

Deliver a high quality STEM experience. Explore the properties of light, define optical design, demonstrate energy conversion, generate thermal energy, understand renewable energy and teach sustainability, all while cooking something great! Kit includes solar balloon, mylar sleeve, "I" balloon, four weight tubes, two inflating straws, two hook and clasp straps, black pan, black cooking liner, repair tape, two oven bags, instruction guide and STEM activity guide.

SB52005M \$91.85



Physics Workshop

Through building 36 models and conducting subsequent experiments with the models, you will learn the fundamental laws of mechanical physics. This kit includes more than 300 building pieces. The 64-page, full-colour manual presents assembly instructions, experiments and explanations in a richly-illustrated, easy-to-follow manner.

731380 \$82.50



Fuel Cell 10 Car & Experiment Kit

With this unique kit, you can build your own experimental reversible fuel cell car to learn more about this energy source. With more than 30 experiments and demonstrations, users will learn how a reversible fuel cell works to perform electrolysis as well as to create energy. The electricity required to activate electrolysis is created with a large solar cell included with the kit. During electrolysis, water is separated into hydrogen and oxygen and the resulting energy is stored as a gas. When needed, the gas is fed into the fuel cell, which then serves as the power source. Includes a 64-page, full colour Experiment Manual with over 30 experiments.

732582 \$320.00



Hydropower

Hydropower has been used for hundreds of years in watermills and is now commonly used to generate electricity in applications such as hydroelectric dams and tidal power plants. Explore the power of water by building models and conducting experiments with them. Build a waterwheel, a sawmill, and a hammermill to harness the energy of moving water to do different types of physical work.

732584 \$79.65



Wind Power V 3.0

The blades are designed with complex aerodynamic curves to look and work like modern-day wind turbine blades. Conduct experiments with your wind turbine, including experiments to optimize its performance by adjusting the angle of the blades and the placement of the turbine. The full-colour, 32 page manual offers illustrated instructions and scientific information.

730319 \$77.45



Solar Kit

Use this kit to demonstrate the effect of solar power and its ability to be converted to mechanical energy, light energy, battery power, and current. Includes mounted solar cell (3½" x 3½") with terminals, a motor, an LED, as well as a mounted battery and ammeter on an 8" x 4¾" base. Battery and ammeter each have their own terminals.

SB43494M \$58.55



Solar Experimenter's Kit

Build your own solar demonstrator with this low-cost experimenter's kit. This project-minded kit contains an encapsulated solar cell module, DC motor, holographic disc, and an informative solar energy booklet with charts and graphs explaining photovoltaic solar energy.

SB07000M \$19.85



K'NEX Education Renewable Energy

Set includes 550 K'NEX pieces and colour-coded building instructions to build 9 curriculum related models. Builds 3 models at a time. One 1.38v - 500mA solar panel, 3 motors and power cords, and 1 capacitor for energy storage included. Comprehensive teacher's guide with inquiry-based lesson plans and background information is included.

Key Concepts

- Solar, Wind and Hydro Power
- Energy Storage
- Green Energy/Clean Energy
- Force, Motion, Work and Power
- Energy: Radiant, Mechanical, Electrical
- Conservation of Energy
- Kinetic and Potential Energy

733368 \$299.95

Solar Science Station

Handy project with three different uses: solar USB charger, power supply for other gadgets, and a tool for recording solar data for use in a classroom or science project. Designed around a large 6V 200mA solar cell on a rotating axis for adjusting the angle of the solar cell. Angle degrees are displayed on the side. Combine the degree of the angle, the time of day, the direction, and the voltage output for a plethora of scientific data to record. Station front contains several ports, including an LED voltmeter, a USB port for powering USB gadgets, and two simple terminal screws for direct power out. All the wires are connected to a central screw terminal hub, making the kit reusable and easy to fix. Kit contains everything needed except a screwdriver and a wire stripper. No soldering required!

735280 \$78.40



Basic Solar Kit

This simple experiment demonstrates the conversion of solar energy to electric power. Kit includes a 400mA solar cell, leads, motor, propeller and instructions.

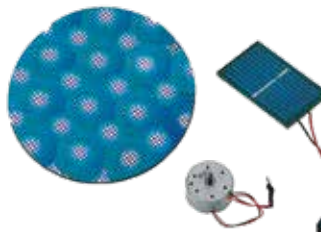
56848 \$19.90



Solar Science Kit

Designed to help you explore and learn about the abundant power of solar energy. Includes an informative solar sheet packed with ideas for science projects. Kit contains a PV cell, high efficiency motor, and a disk with diffraction foil.

SB27511M \$19.15



Solar Kit Motor

Low-cost solar motor operates 1/2V to 3V. Low torque — high rpm. 200 ma start up. Runs at 80 ma no load. Shaft: 2 mm x 1½" long.

SB33479M \$8.45



new

Photon Sustainable Energy Education Kit

The Future of Sustainability is NOW!

Fostering the right behaviors among future generations is undoubtedly one of the main tasks of all educators. Shaping an attitude of respect for the natural environment

must find a place on teachers' to-do lists. Students learn about the concepts and phenomena that surround them every day through hands-on projects, developing an understanding of how much impact they have on the environment.

You're able to help students learn about such topics as waste segregation, saving energy, ecological transport, green cities, and recycling.

All a teacher needs in one box

- Photon Robot for Education (2 pcs.)
- Photon Magic Dongle (2 pcs.)
- Photon Dry-erase Mat
- 10 Lesson plans
- A marker holder
- A wiping cloth for the mat
- 32 Worksheets
- 3 Character cutout sheets
- 19 Neodymium magnets
- 3 Markers
- Dice and game pieces (1 set)
- Paper notes (1 set)
- A set of cards (1 set)

735667 \$1,150.00



PHYSICAL SCIENCE

ELECTRICITY



Uses conductive and insulating play dough to teach the basics of electrical circuits, a perfect blend of play and learning! Our play dough kits, projects, and recipes teach problem solving and engineering concepts and inspire creativity and independent thinking.



squishy circuits Deluxe Kit

The deluxe kit is our most complete squishy circuits kit. It comes with more items than the standard kit and comes with pre-made doughs so you can start circuit building right away! This kit also includes a deluxe battery holder which has a knob that allows your lights to blink and buzzers to beep at different speeds.

Includes:

- Battery holder (4 AA batteries not included)
- Piezoelectric Buzzer
- Mechanical Buzzer
- Motor with fan blades
- Switch
- 7 x 7 oz. containers of Conductive Dough (red, blue, green, yellow, orange, purple, and black)
- 40 - 10 mm LED's
- 5 Sculpting Tools
- Rolling Pin
- 1 x 7 oz. container of Insulating Dough
- Recipe card and quick start guide

730945 \$99.95



squishy circuits Standard Kit

The standard kit includes most of the components to be used with squishy circuits for more design creativity. The dough is easily made with the included recipes and common kitchen ingredients.

Includes:

- Battery holder (4 AA Batteries not included)
- Piezoelectric Buzzer
- 25 - 10 mm LED's in red, green, and blue
- 1 x 3.5 oz. container of insulating dough
- 3 x 3.5 oz. containers of conductive dough (red, blue, and green)
- Recipe card and quick start guide

732943 \$43.95



squishy circuits Lite Kit

The lite kit is the most basic kit and includes everything that you need to make your first squishy circuits light up quickly and easily. It is ideal for classrooms, parties, or events where every participant needs their own battery pack and wants to get started building right away.

Includes:

- Battery holder (4 AA Batteries not included)
- 1 x 7 oz. container of Conductive Dough
- 15 - 10 mm LED's in red, green, and blue
- Recipe card and quick start guide

732941 \$22.30



squishy circuits Group Kit

The group kit is great for classrooms, makerspaces and more! Every group kit is packed in a sturdy, plastic case.

Includes:

- 10 - Battery Holders (40 AA Batteries not Included)
- 10 - Buzzers
- 10 - Motors with Fan Blades
- 10 - Switches
- 80 - LEDs - 10 each in Red, Green, White, Yellow, Orange, Purple, Blue, and Colour Changing

We suggest up to 3 children per battery holder, so this kit accommodates groups of 1-30.

This kit does not come with dough, but we suggest purchasing two 'squishy circuits Dough Kits' which will provide the correct amount of conductive and insulating dough. Remember that making the dough can be a fun group activity! We would still suggest purchasing insulating dough though because the purchased version works much better.

735019 \$344.95

squishy circuits Dough Kit

The dough kit includes 7 containers of conductive dough and 1 container of white insulating dough! Each container holds 7 ounces (a normal, bought container is 5 ounces). The dough does contain gluten, but is safe and non-toxic. The conductive dough does dry out if left out of the container, but the insulating dough does not dry out.

735018 \$24.95





ELENCO®

Snap Circuits® PRO

Contains over 75 parts including voice recording IC; FM radio module; analog meter; transformer; relay; and 7- segment LED display. Build over 500 projects. Hours of educational fun; a great gift too! Includes all of the Snap Circuits® 300 Deluxe projects and 200 more!

732655 \$146.55

SB39454M Set with hard case **\$247.65**

Snap Circuits™ Educational Kits

Just follow the colourful pictures in the guide and build exciting projects! All parts are mounted on durable plastic modules and snap together with ease. No tools required except "AA" batteries. (NOTE: Mini Kits do not include a case).



300-Experimental Set

Build over 300 electrifying experiments with this 60-piece set, such as motors, lamps, speakers, resistors, capacitors, switches, and more.

77794 Set with hard case **\$195.30**

SB37730M Set in box **\$123.40**

Snap Circuits® Mini Kit

FM Radio

Build this kit then tune it into your favorite FM radio station when you're finished. Other projects: power amplifier, electronic kazoo, and trombone. Requires two "AA" batteries (not included).

SB42165M \$41.15

AC Snap. Tired of buying batteries for your Snap Circuits? With this battery eliminator you won't ever have to buy batteries again. Works with all versions of Snap Circuits.

SB44653M \$29.85

Snap Circuits® LIGHT

Watch and be amazed at what your music can do with the new Snap Circuits® LIGHTS. Connect your iPod® or any MP3 player and enjoy your music as the lights change to the beat. Features: Infrared Detector Strobe Light, Colour Changing LED Lighted & Glow-in-the-Dark Fans Strobe integrated circuit (IC) Fiber Optic Communication Colour organ controlled by iPod® or other MP3 player, voice or finger Pre-punched patterns for motor. Contains over 55 Snap-Together parts. Build over 175 exciting projects.

732657 \$122.50

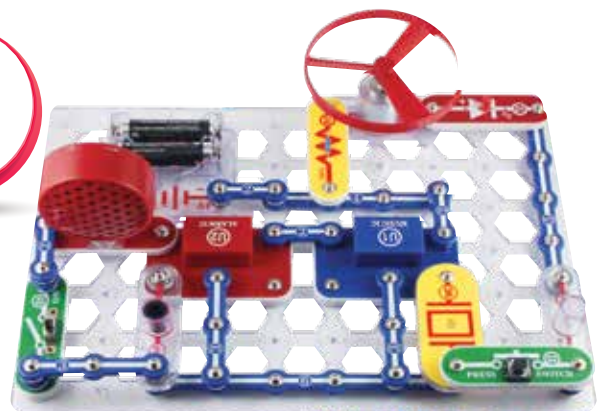


Snap Circuits® Alternative Energy Kit

Learn about energy sources and how to "think green."

Build over 125 projects, using the flexibility of the award-winning Snap Circuits®, to have loads of fun learning about environmentally friendly energy and how the electricity in your home works. Includes full-colour manual with over 100 pages and separate educational manual. The educational manual will explain all the forms of environmentally friendly energy including: geothermal, hydrogen fuel cells, wind solar, tidal, hydro, and others. Features hand crank, solar cell, FM radio, energy compartment, rechargeable battery, windmill, clock, and analog meter. Contains over 40 pieces.

SB46741M \$119.55



Snap Circuits Educational Kit (Jr Edition)

Make learning electronics a "snap"! Enjoy hours of educational fun while learning about electricity and electronics. Just follow the colourful pictures in the guide and build exciting projects such as radios, voice recorders, doorbells, and more! All parts are mounted on durable plastic modules and snap together with ease. No tools required. Requires "AA" batteries (not included), or adapter.

100 Experiment Set. This set is perfect for beginning electricity! Includes: 30-piece set and activity guide to build parallel and series circuits, resistors, capacitors, and motors. For 1-2 Students.

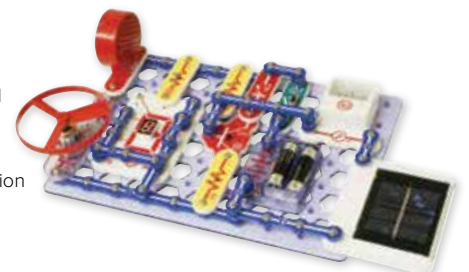
732646 Soft Case Kit **\$59.40**

SB39452M Set with hard case **\$82.15**

Snap Circuits® EXTREME

Contains over 80 parts to build over 750 projects. Includes everything from 732655 Snap Circuits® Pro plus projects in solar; electromagnetism; vibration switches; and 70 computer interfaced projects.

732656 \$210.50



Explore STEM and STEAM through fun filled, project based kits and activities!



Learn, Create, and Inspire—Even on a Budget

Creating a project from scratch can be difficult for the casual builder. Finding the right directions, the right parts, and the right tools—all at the right price—can be a major hurdle.

Kits and projects for creators of all ages and budgets. Follow the step-by-step project directions and learn more with the classroom resources or find individual parts to dream up your own creations. No matter how or what you create, our products can help you learn the basics of electronics, circuitry, and solar energy.



Bristlebot

Small robot consists of a toothbrush head with double-sided tape strip, a vibrating pager motor, a battery, two chenille stems, and two googly eyes. The vibrations from the pager motor travel down the bristles and cause the entire robot to scoot along flat surfaces. A great way to demonstrate the same scientific principles that cause a cell phone to move across the table when in "vibrate" mode. Each robot requires one coin cell battery (included).

735274 4 Pack \$39.40
735275 10 Pack \$84.00
735276 25 Pack \$165.00



Solar Cockroach Kit

The Solar Cockroach is a little bug that uses the solar energy to power a vibrating motor. The vibrations from the motor travel down the legs, causing the bug to scoot around. These little vibrating bugs are essential tools for teaching beginning soldering lessons to students and adults of all ages. This project also offers a lesson in solar energy, motion, and vibration. Simply place the completed Solar Cockroach in the sun and watch it vibrate and scoot around! This project can now be completed with or without soldering using the included Maker Tape. Requires basic soldering knowledge.

Parts Included:

- 50 Jumbo Paper Clips
- 50 Googly Eyes
- 25 Solar Cells (2V)
- 25 Vibrating Motors
- 7 pcs Magnet Wire
- 1 Roll of Maker Tape™
- Online Video Guides

735261 \$165.80



Paper Circuits

Why mess with wires when you can use Maker Tape conductive nylon tape and LEDs to easily create fun circuitry projects in minutes? Add them to anything that you can apply tape to, from your next greeting card to a fun-filled cardboard Halloween robot costume.

- Create projects from scratch or download and use one of many available free templates and build guides
- Tape's nylon fibers combined with conductive materials result in an amazingly strong and highly conductive tape that won't leave a mess on your project
- Tape is specially designed to be z-axis conductive for much easier project creation
- Overlap 2 pieces of tape to create a solid electrical connection
- Tape down the component for a simple connection
- Engaging for students of all ages

Standard Kit

- Includes:
- 30 Jumbo LEDs
 - 10 Binder Clips
 - 10 Coin Cell Batteries (CR2032)
 - 1 Roll of 1/4" Maker Tape™ (16ft)

735277 \$44.50

Classroom Set

- Includes:
- 120 Jumbo LEDs
 - 25 Coin-Cell Batteries (CR2032)
 - 25 Binder Clips
 - 3 Rolls of 1/4" Maker Tape™ (48ft)

735278 \$165.50



Crazy Circuits 101 Classroom Sets

Learning circuits is easy with Crazy Circuits Classroom Sets. Covers simple circuit design, including switches, diodes, batteries, resistors, transistors, and integrated circuits. Each set includes self-contained project boxes for students, as well as a dedicated teacher supply box. Free online access to curriculum, lesson plans, and student activity packets are included.

735262 4 Pack \$1,005.00
735265 24 Pack \$3,864.00



Crazy Circuits Programming 101 Classroom Sets

Learning circuits is easy with Crazy Circuits Classroom Sets. Uses Arduino™ programming to read sensor values (distance, temperature, humidity, light), output data through a display, manipulate sound and light outputs, and drive servos. Each set includes self-contained project boxes for students, as well as a dedicated teacher supply box. Free online access to curriculum, lesson plans, and student activity packets are included.

735266 4 Pack \$1,715.00
735269 24 Pack \$5,650.00

Maker Tape 1/4", 20M Roll, Nylon Conductive Tape

Nylon fibers combined with conductive materials results in an amazingly strong and highly conductive tape that won't leave a mess on your next project. Turns any surface into your next circuitry project. Use it on walls or windows, cardboard or fabric, design your own Paper Craft creation for use with Crazy Circuits. Unlike other conductive tape options Maker Tape is specially designed to be Z Axis Conductive for much easier project creation.





Crazy Circuits Deluxe Kit

Start designing your own interactive and programmable projects with the Crazy Circuits Deluxe Set. Use the included Invention Board to turn any conductive material into an interactive surface. Add parts and programming to your next LEGO® project to give it dazzling effects. Follow our guides and projects to learn how to program your own code to start your next big idea. Crazy Circuits parts are compatible with LEGO® and similar brick building systems. Crazy Circuits parts come 100% ready to go out of the box, which means no soldering or preparation required. This kit covers topics such as circuitry, robotics, programming, logic, design, sewable technology, art, and design. Detailed directions, project guides, educational resources, and videos can be found in our online database.

Includes:

- Crazy Circuits Chips
 - Invention Board and USB Cable
 - Blink/Fade Board
 - Three Standard Pushbuttons
 - Three Jumbo Pushbuttons
 - Two Slide Switches
 - Three Coin Cell Battery Holders
 - Ten Jumbo 10 mm LEDs (Red, Amber, Green, Blue, White)
 - Five Mini Surface Mount LEDs (Red, Amber, Green, Blue, White)
 - Five Brick LEDs (Red, Amber, Green, Blue, White)
 - Mini RGB LED
 - Piezoelectric Speaker
 - Two Screw Terminals
- Conductive Nylon Tape, 1/8", 16 feet
- Conductive Thread Bobbin - 16 feet
- Five CR2032 Batteries
- 2AAA Battery Holder
- LEGO™ Baseplate (8x16 studs)
- Plastic Organizer

735272 \$275.95

Origami Circuits Kits

Bring your paper crafts to life! A perfect opportunity to put the "A" in STEAM education or hobby projects, these kits include all you need to blend the centuries-old paper craft of Japanese Origami with circuitry! Use solderless pathways created by our exclusive conductive Maker Tape™ and the included circuitry components to make your folded masterpiece light up and/or move. Origami Circuits are a great way to teach engineering, motors, circuitry, electricity and ART all at once!

Starter Kit

Includes:

- 30 pcs Origami Paper
- 5 Colour-Changing LEDs
- 5 Blinking LEDs
- 5 Coin Cell Batteries (CR2032)
- 4 Vibrating Motors
- 1 Roll of 1/4" Maker Tape™ (5m)
- 1 Robot Template

735282 \$44.50

Class Kit

Includes:

- 200pcs Origami Paper
- 25 Colour-Changing LEDs
- 25 Blinking LEDs
- 25 Coin Cell Batteries (CR2032)
- 25 Vibrating Motors
- 2 Rolls of 1/4" Maker Tape™ (20m)

735283 \$199.95

Crazy Circuits Sewing Kits

Explore the world of electronics sewing and wearable technology with the Crazy Circuits Starter Sewing Kit. Add lights to clothing or design your own projects using our online tutorials. Use our pre-programmed Blink/ Fade Board to give your lights effects and patterns. Crazy Circuits parts are compatible with LEGO™ and similar brick building systems. Crazy Circuits parts come 100% ready to go out of the box, which means no soldering or preparation required. This kit covers topics such as circuitry, programming, logic, design, sewable technology, art, and design.

Starter Kit Includes:

- 16ft of Conductive Thread
- 5 Coin-Cell Batteries (CR2032)
- 4 Jumbo Sewable LEDs
- 2 Needles
- 2 Button Snaps
- 2 Sewable Battery Holders
- 1 Threading Tool

735270 \$36.50

Class Kit Includes:

- Art Supply Organizer
- 13 Sheets of Fabric
- 25 Battery Holders
- 25 Jumbo Colour Changing LED Boards
- 50 SMT LED Boards
- 12 Bobbins of Conductive Thread
- 25 Batteries
- 25 Needles
- 25 Needle Threading Tools
- 25 Button Snap Sets
- One Starter Sewing Supply Kit

735281 \$390.00

Crazy Circuits Makerspace Set

Create projects both big and small with over 160 included parts. Use the Invention and Robotics boards to follow one of the programming guides, or create your own code from scratch. Have your students create wearable technology using conductive thread. Crazy Circuits parts are compatible with LEGO™ and similar brick building systems. Crazy Circuits parts come 100% ready to go out of the box, which means no soldering or preparation required. This kit covers topics such as circuitry, programming, logic, design, sewable technology, art, and design.

Includes:

- Crazy Circuits Chips
 - Five Invention Boards and USB Cables
 - Three Robotics Boards and USB Cables
 - Five Blink/Fade Boards
 - Five Standard Pushbuttons
 - Five Jumbo Pushbuttons
 - Five Slide Switches
 - Five Coin Cell Battery Holders
 - Twenty Jumbo 10mm LEDs (Red, Amber, Green, Blue, White)
 - Twenty Mini Surface Mount LEDs (Red, Amber, Green, Blue, White)
 - Fifteen Brick LEDs (Red, Amber, Green, Blue, White)
 - Five Mini RGB LEDs
 - Five Piezoelectric Speakers
 - Ten Screw Terminals
- Ten Rolls of Conductive Nylon Tape, 1/8", 16 feet
- Five Bobbins of Conductive Thread, 16 feet
- Ten Alligator Clips
- Fifty CR2032 Batteries
- Five 2AAA Battery Holders
- Three Standard Servo Motors
- Six Continuous Rotation Servo Motors
- Ten LEGO™ Compatible Servo Brackets
- Ten LEGO™ Compatible Servo Horns
- Ten LEGO™ Baseplates (8x16 studs)
- Plastic Organizer





Top View of Switch Circuit



Bottom View of Switch Circuit

Doodle Circuits with Silver Conductive Ink!

Explore art and creativity as you learn about electronics with Circuit Scribe STEAM kits. Based around our conductive silver ink pen, you can doodle working circuits that power lights, motors, sounds and more. Let your imagination run wild as you draw circuits and draw your own connections.

Here's how it all works: Doodle your circuits on paper (either using our Inventor's Notebook patterns, or invent your own); place the included metal sheet underneath your paper; then snap on the magnetic modules to bring your drawing to life. Switch on the battery module to light up lights, run motors, power a buzzer, or connect advanced modules like transistors, potentiometers, and double switches.



Circuit Scribe Super Kit

The Super Kit contains a full-size pen and modules that introduce more advanced concepts, including light & sound to take your circuit sketches to the next level!

This electronics kit for students allows you to explore conductivity & touch-sensitive circuits, and to build your understanding of inputs, outputs, and signal processing in your circuits. Additional topics to explore in the guided workbook include light sensing, drawing circuits, timed circuits, piezoelectric materials, and more.

11 Modules:

- 9V Battery adapter with 9V battery
- x2 LEDs
- Switch
- Transistor
- Dial
- Dimmer
- Blinker
- Buzzer
- Multi-Coloured LED
- Light Sensor

Additional Items:

- Conductive Ink Pen
- Circuit Stencil
- Jumper Sticker Sheet
- Workbook
- Steel sheet

730824 \$134.50



Circuit Scribe Pen

735056 \$13.50



Circuit Scribe Basic Kit

The Basic Kit is an entry level kit with a full-size pen, light outputs, and so much more! Explore basic circuit concepts like conductivity and work up to creating two kinds of blinking circuits using both the blinker circuit module and hand-drawn momentary switches.

The Basic Kit comes with an Inventor's Notebook with an overview on how to use the kit and 8 pages of circuit drawing projects. Our Basic Kit Plus contains a workbook with 27 pages of lessons that works through resistance, elements in parallel and series, open circuits and short-circuits, and drawing electrical circuits.

Includes 6 Modules:

- 9V Battery adapter with 9V battery
- x2 LEDs
- Switch
- Blinker
- Dimmer

Additional Items:

- Conductive Ink Pen
- Circuit Stencil
- Jumper Sticker Sheet
- Workbook
- Steel canvas

730822 \$72.75



Electricity Kit

The kit comes in a carry box containing over 100 items including motors, bulbs, buzzers, LEDs, batteries, battery holders, a selection of 6 types of switches, ready made leads, automatic wire strippers/cutters and electricians screwdrivers. In addition, this pack is fully supported with a comprehensive teacher/student book which is reproducible.

43038 \$218.25



Conductivity of Solutions

Used to test the electrical conductivity of liquids by introducing a DC current through the solution and observing the effects on an electrical lamp. Comes complete with plastic reservoir, light bulb and instructions.

77298 \$15.50



Conductivity Meter Tester

A very simple and easy unit to compare conductivity of different solutions, acids, or salts. Dip the probes, press the button, and note. The conductivity can be compared in six levels. The red LEDs give a quick visual comparison. Features 3 1/4" L x 1/8" thick stainless steel probes. Total length with probes: 7". Requires two "AA" batteries (not included).

SB48978M \$28.85

Electricity Kit

Complete set including the 32-page Teacher's Guide Electricity (20356). Consists of 20 2.5V bulbs, 20 bulb holders, 20 switches, 1 bell, 4 buzzers, 4 motors, 4 motor mounts, 30m of copper wire, wire stripper, and 10 battery holders with fahnstock clips and metal plate. Plastic storage container with lid.

00016M \$149.95

Discovery Kit® Electricity

An activity kit with 2 battery holders, 2 bulb holders with bulbs, 2 switches, 10 wire connectors, and an instructional guide introducing students to switches and conductive materials, circuit drawings, parallel and series circuits, and testing circuits.

70020 \$16.95



PHYSICAL SCIENCE

ELECTRICITY



SciQuest® Current Electricity Kits

Already aligned with the Next Generation Science Standards, this interactive kit allows students to detect and investigate the direction of current flow and magnetic fields, batteries and chemical voltaic cells, series and parallel circuits, voltage, amperage, resistance, work done in electrical circuits, electrical heating effects, short circuits, and fuses. When used in conjunction with your in-place curriculum, this SciQuest® kit will help you add a meaningful and exciting dimension to the teaching opportunities you provide for your students. Teacher's guide included.

Current Electricity Multi-Group Kit. Contains enough materials for six work stations.
SB50691M \$620.80

Current Electricity Demonstration Kit. Contains enough materials for one work station or a classroom demonstration.

SB50150M \$142.75

Electric Bell. High quality. Double coil bell measures 2½" W x 5½" L. Requires 3V to operate.

S09296M \$22.25



**Exclusive
KIT**

Spectrum's Electricity Kit

Spark interest in electricity with this fun kit! Includes: 16 economy bulb holders, 16 economy switches, 16 miniature bulbs, 30 wire connectors, 16 battery holders, 16 "D" cell batteries, 2 motors, 2 buzzers, 32-page teacher's guide, and plastic tote for storage. For 15 - 30 students.

730682 \$109.92

730682F French \$109.92

Wire Cutter/Stripper

51702 \$5.10



Wire Stripper

08623 \$7.10

Wire Stripper

Heavy-gauge steel wire cutter, stripper, bolt cutter, and crimper. Permanent black finish with PVC grip handle. 8" long.

SB27693M \$8.25



Electric Bell & Buzzer

Useful for showing examples of electromagnets, four sources of sound, etc.

03720 Bell \$24.00

03721 Buzzer \$38.00



CaddyStack Electricity Kit

Spark interest in electricity with this fun kit! Includes: 16 miniature bulbs, 16 bulb holders, 16 switches, 16 "D" batteries, 16 battery holders, 30 wire connectors, two motors, two buzzers, 32-page teacher's guide, and plastic tote for storage. For 15—30 students.

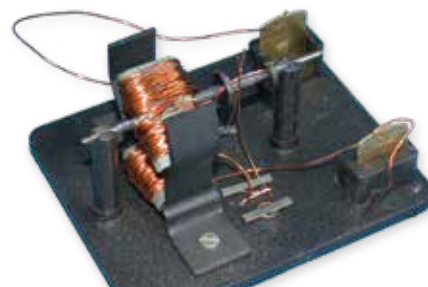
20355 \$164.00

20355F French version \$164.00

DC Motor Kit

This kit allows students to build their own DC motor from scratch. All of the needed parts are included along with a detailed instruction manual. The unit runs on one AA battery.

77300 \$19.95





Two-Potato Clock

Designed to demonstrate the principle of an electrochemical cell. This LCD clock runs on two potatoes, oranges, grapefruits, or cans of soda pop. An excellent demonstration unit.

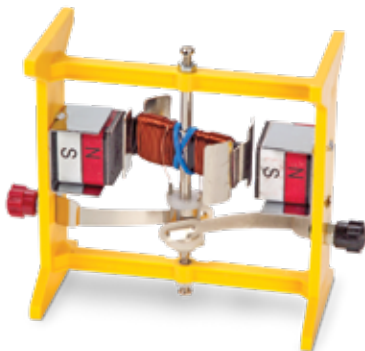
733122 \$30.30



World's Simplest Motor

This simple motor kit is easy to build, and demonstrates the basic principles of electromagnetism. The directions are complete, easy-to-follow, and include a short explanation of the working of the motor.

732644 \$9.35



DC Motor

This preassembled DC motor was designed for students to learn about electromagnetic forces. The open structure resembles the diagram in most standard textbooks. Polarity of the magnets can be reversed to change the direction of the rotation. Can also be used with a rheostat to observe the change of speed with the change of current. Can stand vertically or horizontally for best view. Can operate on a 1.5V battery. Dimensions: 4" x 5" x 2". Comes in a plastic storage case.

SB30029M \$21.55



AC/DC Generator Demo Set

This unique hand generator is an easy yet effective way to teach how AC and DC electricity is produced. Banana plugs can be inserted into the different connectors to change from AC to DC electricity. This unit has a clear base for easy demonstration of connections. Activity guide included. Dimensions: 10" x 7" x 9".

SB47753M \$68.00



SB48089M



SB48090M

Genecon Handheld Generator

Generates up to 12V DC. Clear transparent shell showcases the internal mechanism. Bright red handle with reinforced thumb grip and longer lead wire provide extra versatility. Lead wire is colour coded (red and black). Reinforced internal gears improve the longevity of the unit. Includes an illustrated activities manual.

SB48089M \$65.00

Pkg. of 3 Replacement Gears.

SB48090M \$27.85



DC Generator

This generator can be utilized with almost any experiment requiring up to 12V DC current. Housed in tough clear plastic, this unit is not only functional, but costs about half that of similar models. Can also be used as a hand-generated flashlight due to the mounted lamp on the end or use the binding post to connect an outside electrical circuit. Pistol-grip handle.

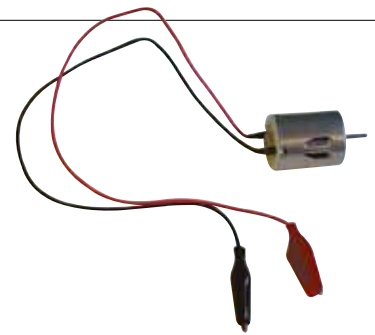
77302 \$19.50



Universal Mounting Clip

Ideal for holding components between 3/4" to 1" (19 to 25 mm) diameter in position. Great for use with electric motors, plastic syringes, or batteries. Pack of 10 includes sticky pads and internal collar for items of smaller diameter.

09909 \$14.50



DC Motor with Alligator Leads

This little yet powerful motor is ideal for hundreds of electrical experiments and projects. Voltage requirements are 4.5 to 6.0 dc volts. Each unit also incorporates a red and black connector cord with insulators. Overall length: 3".

SB39321M \$4.15



Economy Motor

1.5-3V DC

20312 \$15.00

Pkg. of 100

48998 \$99.95

Mini Motors - Pack of 5

Round 4.5V

730268 \$8.20

Round 1.5V - 3.0V

730269 \$8.20

Rectangular 1.5V - 3.0V

730270 \$8.20



Hi-Speed Motor

3-6V DC, with 2mm shaft.

55222 \$2.90



PHYSICAL SCIENCE

ELECTRICITY

Digital Multimeter

An accurate, compact, multi-function, easy-to-read, handheld instrument designed for field, laboratory, and school use. Features: extra-large 3 1/2" digit LCD display, low-battery display, floating decimal point, frequency counter (up to 20 MHz), AC and DC current (0-10A, three ranges), transistor hFE test, resistance (0-20MΩ, six ranges), low OHM continuity beeper, transistor hFE test socket, recessed input jacks, low power consumption, over range indicator, automatic polarity indicator, AC and DC voltages (600V, 5 ranges), capacitance (up to 20μF, 5 ranges), diode test function, capacitance test sockets, and input impedance 10MΩ on all ranges of AC and DC voltage measurement. Protected three ways against accidental overloads, including overvoltage and overcurrent protection, and transients.

SB27462M \$77.55



Student Meters

These economical, closed-back student meters offer reliability, ruggedness, and affordability all in one unit. Each meter is housed in a durable black plastic case measuring 13.8 cm x 10.0 cm x 9.8 cm. The large 9.5 cm x 8.1 cm clear plastic meter face is designed for easy viewing and has an external zero adjustment. All meter movements are diode protected against overload. Five-way versatile binding posts are simple for students of all levels to use. Accuracy ±2.5% of full scale on all models.

Cat. No.	Meter Type	Scale	Range	Each
SB26365M	DC Voltmeter	Single	0-10V	\$16.55
SB26366M	DC Voltmeter	Double	0-5/0-15V	\$19.85
SB26368M	DC Voltmeter	Triple	0-3/0-15/0-300V	\$23.15
SB26374M	DC Ammeter	Double	0-1/0-5A	\$19.85
SB26381M	DC Milliammeter	Triple	0-5/0-50/0-500mA	\$16.55

Cat. No.	Meter Type	Scale length	Range	Each
SB53050M	AC Electrical Ammeter	75 mm	0-1/0-5A	\$24.35
SB53051M	AC Electrical Ammeter	75 mm	0-100/0-500mA	\$26.25
SB53053M	AC Electrical Ammeter	75 mm	0-1000mV	\$24.35

Galvanometer 20 - 0 - 100 mA Resistance 1000

Moving Coil Meters DC Type MR - 100 Clear acrylic front cover, fully enclosed economically priced and offer + 2.5% accuracy. This galvanometer can be converted into any type of Ammeter / Voltmeter using shunts. 20 - 0 - 100 mA Resistance 1000.

2495M \$38.50



Digital Multimeter

Compact-sized, full feature digital multimeter with 3.5 digit LCD readout (1/2" high). DC voltage range: 200mV, 2000mV, 20V, 200V, 1000V. DC current range: 200uA, 2000uA, 20mA, 200mA, 10A. AC voltage range: 200V, 750V. Resistance range: 200Ω, 2000Ω, 20 KΩ, 200KΩ, 2000KΩ. Requires one 9V alkaline battery (battery life approximately 200 hours). Dimensions: 5" x 2 3/4" x 1". Colour may vary.

SB26578M \$25.55



Digital Multi-Meter

A versatile meter for any electrical experiment requiring the accurate measurement of voltage, current or resistance. 5" tall display. 9 volt battery. Includes cords.

731474 \$19.95



Energy Ball

Fascinating and fun! By touching two metal strips simultaneously, your body becomes a path to a complete circuit. The result? The ball flashes brightly and makes an eerie sound. The Energy Ball even works with several people creating the path.

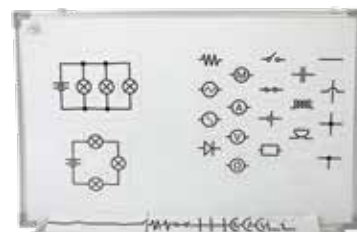
20305 \$7.90



Stick to Science Circuits

Easily manipulate circuit diagrams on the board. These 78 magnetic pieces have everything you need to teach common electrical circuit symbols, to sort the components of a circuit and to display series and parallel circuits. Includes a teacher's guide with example activities included. Magnetic whiteboard not included.

730919 \$22.50



Tangent Galvanometer

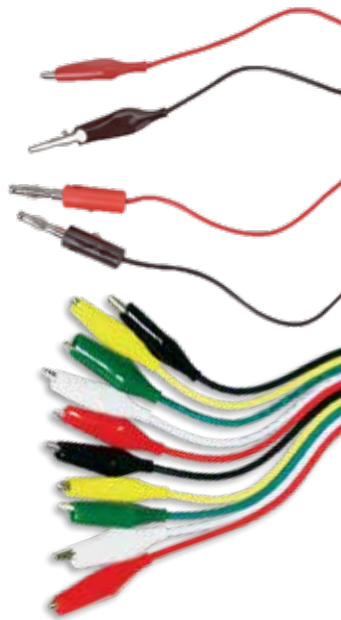
Consists of three coils of insulated copper wire mounted on bakelite moulded platform fitted with 4 terminals, rotating on a tripod non-magnetic metal base. The plastic ring or bobbin, 162.5 mm overall diameter wound with three coils of insulated copper wire with 2, 50 and 500 turns mounted on bakelite moulded platform fitted with 4 terminals, rotating on a tripod non-magnetic metal base, supported by levelling screws. Complete with compass box (Magnetometer) mounted at the centre of the ring.



Banana Plug Cords with Alligator Clip

Flexible, plastic-covered with a banana plug at one end and an alligator clip at the other. Alligator clip has protective vinyl sheath. Pkg. of 6: three red, three black.

SB13990M 12" cords **\$9.95**
SB13991M 24" cords **\$11.45**



Alligator Lead Set

Package of 10 alligator leads in five colours: two each red, white, black, green, and yellow. Cords measure 14" L.

SB51195M **\$15.45**



Wires with Alligator Clips

Pack of 10. Flexible, plastic-covered wire with alligator clips at both ends.

06154 **\$5.15**

Alligator Connector Cords

Flexible, plastic-covered wire with alligator clips at both ends. Alligator clips have protective vinyl sheath. Pkg. of 6: three red, three black.

SB13984M 12" cords **\$7.00**
SB13985M 24" cords **\$9.00**



Banana Plug Cords, Stacking Type

Two-way stack plugs are at both ends of these flexible coated wires. Pkg. of 6: three red, three black.

SB13988M 24" cords **\$21.65**



①



②



③



④



1. Series 2000 Type (BC) Bare Copper Bus Bar Wire

Solid soft-drawn and annealed copper. Characteristics: ASTM-B-3, QQ-W-343 Type S. Available in 4-oz. and 1-lb. spools of various gauges.

4-oz. Spools.

SB10505M 16-gauge (32 ft.) **\$9.00**
SB10507M 20-gauge (80 ft.) **\$10.00**
SB10508M 22-gauge (125 ft.) **\$11.45**

1-lb. Spools.

SB10510M 18-gauge (200 ft.) **\$29.65**
SB10511M 20-gauge (320 ft.) **\$33.15**
03170 22-gauge (246 ft.) **\$22.50**
SB10512M 22-gauge (510 ft.) **\$33.15**

2. Series 2000 Type (PE)

Plain Enamel Copper Magnet Wire

Solid bare copper conductor wire with oleoresinous (plain enamel) insulation. Temperature: -30° to +80° C. Characteristics: MIL-W-583 Class 80. Available in 1-lb. spools of various gauges.

SB10515M 18-gauge (195 ft.) **\$28.00**
SB10516M 20-gauge (315 ft.) **\$28.00**
SB10517M 22-gauge (500 ft.) **\$28.00**
SB10518M 24-gauge (790 ft.) **\$28.00**
SB10519M 26-gauge (1260 ft.) **\$28.00**

3. PVC-Covered Copper Connecting Wire

High-efficiency copper wire ideal for use where high conductivity with negligible loss is essential. Available on 100-ft. rolls with PVC insulation. 10-oz. per roll.

22-Gauge.
SB10520M White **SB10522M** Blue
SB10521M Black **SB10523M** Red
 Each **\$11.55**

20-Gauge.

SB40515M **\$16.35**

4. Annunciator-Bell Wire — Copper Wire

A high-quality, PVC-coated copper wire. 18-gauge.

03159 43m spool **\$28.30**



Insulated Alligator Clip

This alligator clip features an insulated handle. Pkg. of 10 clips (five black and five red).

SB23790M **\$11.00**



PHYSICAL SCIENCE

ELECTRICITY

Buzzers

20311 3V \$3.80
08051 6V \$6.40



9 Volt Battery Connectors, Package of 10

5/8" (15 cm) red and black leads with insulated snap-in connector.
735347 \$6.70

Student Cell Electrode Set

Two each copper, lead, and zinc electrodes. One each aluminum, iron, carbon, and nickel electrodes. All are 4" x 3/4" (10 cm x 1.6 cm).

SB14273M \$21.15



Battery Electrodes

Battery electrodes for use in student cells. Select copper or zinc. Both are 3/4" x 5" (22 mm x 125 mm). Pkg. of 12.

Cat. No.	Electrodes	Price
SB16804M	Copper	\$34.00
SB16805M	Zinc	\$24.85



Battery Holder/Joiner

Teaches both series and parallel circuits. Holds a standard "D" size cell battery. High-impact plastic with male and female button snaps on ends and extensions on sides to allow instant connections in series or in parallel without using leads. Extension on sides allow easy wire connections.
06153 \$1.50



Economy Battery Holder

Features Fahnestock clips attached at each end for easy, secure wire connection. The D-cell snaps into the holder which can be joined for series or parallel circuits. Rugged plastic construction.
SB41216M \$2.35



Cell Battery Holders

Holds all standard AA and C cell batteries. 6" red and black insulated wires for easy connection. Curved sides help prevent the battery from falling out when it is upside down. Made of unbreakable plastic.

SB41223M AA Cell Battery Holder \$2.35

SB41224M C Cell Battery Holder \$2.35



Battery Holder with Lead Wires

517821 C Cell \$1.10

68040 D Cell \$1.10



Duracell "AA" Alkaline Batteries

Buying in bulk has never been so economical! A value pack of batteries specifically manufactured to meet or exceed industry standards. Batteries have a long shelf life, so you can use them as you need them.

Pack of 24

SB47852M \$33.75



Bucket O' Batteries

Provide the power for electricity demonstrations, projects, etc. A convenient pack of 48 long-lasting "D" batteries. Batteries come in a storage bucket with lid.

732658 \$89.55

Bucket O' Batteries with Holders

Includes 20 long-lasting "D" alkaline batteries, 15 battery holders, and storage bucket. For 15-30 students.

SB42844M \$63.00



Alkaline Batteries

78288 C \$2.70

78290 D \$2.70

78292 AA \$1.65

78294 AAA \$1.65

78286 9V \$4.30

Duracell Nickel Metal Hydrate Batteries

Rechargeable (Each).

08626 "AA" \$7.45

Carbon Batteries

16342 C \$2.10

08630 D \$2.10

16306 AA \$2.10

Dry Cell Battery

22060 9.0 volt \$2.50



Battery "Joiner" Connector

Connects dry cell batteries at the terminals using a magnet. This facilitates the connection and disconnection of cells due to the positive (+) and negative (-) iron-based terminals. The holder is used to connect C or D batteries. Can be connected in series or in parallel, connected to lead wires, connected to miniature light bulbs, or soldered to coils. Package of 10.





Bulbs

Miniature, screw-base bulbs.

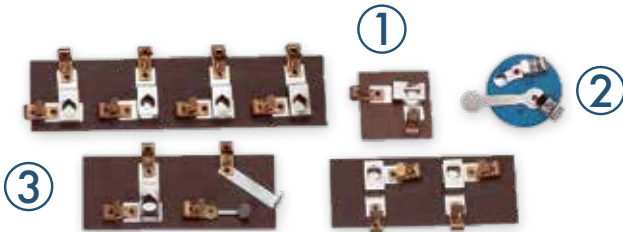
Singles	Product #	Price
2.5V	030381	\$1.00
6.0V	030421	\$1.00



Miniature LED Lights

Miniature LED light bulbs can be used for a variety of scientific and electric experiments, and they use less energy than traditional bulbs! 3.2V, 25mA. Package of 10 bulbs.

SB5117M \$33.25



1. Miniature Lamp Bulb Holders

Designed to study series and parallel circuits. Miniature lamp holders with two Fahnestock clips for connecting wires. Clips allow for completing circuits without the use of a screwdriver. Holders are mounted on Masonite base. Components can be combined to form circuits of multiple lengths. Available in four sizes.

Cat. No.	Description	Price Each
SB17079M	Single Holder	\$2.00
SB18057M	Double Holder	\$3.75
SB18058M	Triple Holder	\$5.55
SB18059M	Quadruple Holder	\$7.35

2. Economy Switch

A 63-mm dia. plastic base with two Fahnestock clips for connecting wires to miniature lamp bulb holder.

03080 \$1.15 ea.

3. Miniature Lamp Bulb Holder with Switch

Mini lamp bulb holder with switch mounted on Masonite base with two double Fahnestock clips for connecting wires. Designed to be used by small groups of students to study basic electrical circuits. 1 3/4" x 5".

SB18060M \$7.55 ea.

Metal Lamp Holder

These miniature sockets with two terminals fit all miniature screw base lamps. Pkg. of 10.

SB46999M \$3.90



Slide Switch

5 pack.

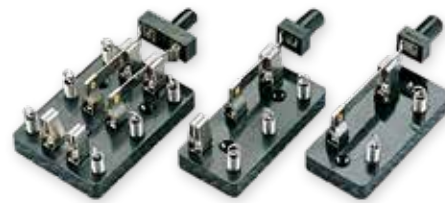
23358 \$4.50



Toggle Switches

The single pole single throw type can be used as a simple on/off switch. Can be mounted.

68046 \$3.20



Knife Switches

Bakelite knife switches with easy-to-use spring binding posts. Elementary to high school level.

Cat. No.	Throw	Pole	Each
03129	Single	Single	\$4.40
03130	Double	Double	\$6.50
730314	Double	Single	\$4.70
68050	Single	Double	\$5.50

Miniature Bulb Holder

Metal components mounted on a 1 3/4" dia. plastic base. Bulb not included.

03082 \$1.15



Receptacle for Miniature Lamp

Plastic base with metal insert which allows easy turn-in and turn-out of the lamp.

Screw terminals.

06156 \$1.85

Fahnestock Clips

For one wire. 1" length, 5/16" width. With screw hole.

Pkg. of 12.

03090 \$3.35



Red Flashing LEDs

731904 Pack of 10 \$16.00

Yellow Flashing LEDs

731905 Pack of 10 \$16.00

Green Flashing LEDs

731906 Pack of 10 \$16.00

Red 8 mm LEDs

731898 pack of 10 \$3.95

Yellow 8 mm LEDs

731899 pack of 10 \$3.95

Green 8 mm LEDs

731890 Pack of 10 \$3.95



Red 5 mm LEDs

731901 pack of 10 \$2.90

Yellow 5 mm LEDs

731902 Pack of 10 \$2.90

Green 5 mm LEDs

731903 Pack of 10 \$2.90



PHYSICAL SCIENCE

ARDUINO EDUCATION

Arduino Education Student Kit, Self Learning

Ages 11-14 years Learn the basics of programming, coding and electronics, including current, voltage and digital logic. No prior knowledge or experience is necessary as the kit guides you through step by step. You'll get all the hardware and software you need for one person, making it ideal to use for remote teaching, homeschooling, and for self-learning.

There are step-by-step lessons, exercises, and for a complete and in-depth experience, there's also extra content, including invention spotlights, concepts, and interesting facts about electronics, technology, and programming. Lessons and projects can be paced according to individual abilities, allowing them to learn from home at their own level. Nine step-by-step lessons with up to 25 hours of learning time.

The Arduino Student kit comes with several parts and components that will be used to build circuits while completing the lessons and projects throughout the course. All neatly packed in a re-usable storage container.

735548 \$89.45



Arduino Education Starter Kit

Ages 11-14 years Teach middle school students the basics of programming, coding, and electronics. No prior knowledge or experience is necessary as the kits guide you through step-by-step, are well-supported with teacher guides, and lessons can be paced according to your students' abilities. You can integrate the kit throughout the curriculum, giving your students the opportunity to become confident in programming and electronics with guided sessions and open experimentation.

Arduino Education Starter Kit contains all the hardware and software you need for eight students (in groups of 2). You get step-by-step-lessons, teacher notes, exercises, and for a complete and in-depth class experience there's also extra optional resources including activities, concepts, history, and interesting facts. The online platform contains the teacher content, nine 90-minute lessons, and two open-ended group projects that teach students coding and electronics. Each lesson builds off the previous one, giving students a further opportunity to apply the skills and concepts they have already learned.

The kit comes with several parts and components that students will use to build circuits as they complete lessons and projects throughout the course. Access code to exclusive online content including teachers' guidance notes, step-by-step lessons and extra materials such as resources, invention spotlights and PDF logbooks for students and teachers.

735540 \$394.90



Arduino Education Explore IoT Kit

Ages 16 years + High school and college students get started with the fundamental concepts of the Internet of Things. It includes all necessary hardware, software, learning content, and support. Recommended for one or two students, all components are packed into a robust reusable toolbox, ideal for storage and years of use.

The kit's hardware includes one MKR 1010 board, the Maker IoT carrier with five tactile buttons and squared LCD display, a set of sensors and actuators, cables, and more (see full list in the tech specs). The kit also gives students access to an online platform with 10 exciting learning activities, which introduce them to the core concepts of IoT.

735542 \$190.95



Arduino Education CTC GO! - Core Module

Ages 14-17 years Engage high school students in STEAM subjects, teach them how to use technology as a tool in a playful, hands-on learning environment, and how to apply that knowledge in the real world. A modular cross-curricular program, CTC GO! provides educators with an easy-to-use, practical approach to STEAM concepts through project based learning and enables students to design, create, and test a series of playful, well documented projects and easy-to-assemble experiments. You'll also get total teaching support with webinars, videos, and direct contact with an expert.

CTC GO! - Core Module is a getting started program including eight lessons, eight guided projects, and six self-guided projects that teach students how to use electronics and gives them an introduction to programming and coding. The lessons increase in difficulty from the very basics all the way through to learning different programming capabilities and building circuits for different sensors and actuators. During the six guided projects, students practice building structures and applying the knowledge acquired in the lessons. Once you have completed the lessons and projects, you will be ready, knowledgeable, and have the confidence to teach the six self-guided projects.

The CTC GO! kit includes all the materials you need to teach 24 students during 20 sessions of 45 minutes each.

735543 English \$2518.40

735543F French \$2518.40



Arduino Education CTC GO! - Core Module, the Motions Expansion Pack

Ages 14-17 years If you've taken your students through the CTC GO! - Core Module, the Motions Expansion Pack will build on what they have already learned about how to use technology as a tool and how to apply that knowledge in the real world. The Motions Expansion Pack challenges them to go a step further in computing and design and technology by introducing them to new and more complex programming concepts that develop their logical reasoning, computational thinking, and problem-solving skills. Students will expand on their knowledge and skills in STEAM subjects to learn about motions by adding mobility to the hands-on, playful projects and transforming the movement their motors provide. As an educator, you'll still get all the teaching support you need with webinars, videos, guides, and direct contact with an expert.

This expansion pack includes 14 learning sessions:

- 7 Guided sessions: 4 Guided activities lessons to learn how to start working with motors and 3 Guided project-building sessions to apply the acquired knowledge
- 7 Self-guided project-building sessions: During these sessions students will develop and build their own projects

735544 \$1590.00



Arduino Education CTC 101 Program, Full

Ages 13-17 years Creative Technologies in the Classroom 101, or CTC 101, is Arduino's one-of-a-kind STEAM (Science, Technology, Engineering, Arts, and Mathematics) program. Tailored for students ages 13 to 17, CTC 101 is the ideal professional development program for educators.

What Does it Include?

- **TOOLBOX:** More than 700 components for a class with up to 30 students.
- **ONLINE PLATFORM:** Access to the Arduino Education Learning Management System with step-by-step instructions and lessons for more than 25 hands-on experiments based on themed modules.
- **SUPPORT:** Guided educators training, live webinars, and forum monitored by Arduino Education experts.

Online Platform

Each CTC 101 purchase includes user access to the online platform. Up to 3 educators are granted access, subsequently they will manage student access with a 30 slot limit per toolbox. The online platform runs on an custom-made Learning Management System (LMS), this platform helps students get started with programming, electronics and build fully-functional, interactive projects with the guidance of educators. Currently available in English, Spanish, Italian and Catalan. Educators are granted access before students so they can prepare and adapt their lesson plans with more engaging and creative techniques so that they take full advantage of the latest technologies to integrate them into their curriculum. The content and class dynamics are specially designed to enhance the students' problem-solving and teamwork skills in a collaborative environment.

735551 \$2898.00



Arduino Education Engineering Kit Rev 2

Ages 17 years + The Arduino Engineering Kit Rev 2 provides extensive learning outcomes, giving students a strong understanding of basic engineering concepts through fun projects that create a collaborative learning environment. Students are able to connect what they learn with real-world industries, are encouraged to think critically, and improve their depth of knowledge by learning through experimentation.

The Arduino Engineering kit Rev 2 is a versatile, hands-on learning tool that demonstrates key control systems concepts, core aspects of mechatronics, and MATLAB and Simulink programming. The projects cover the basics of model-based design, control systems, image processing, robotics, signal processing, and more - plus they're fun to do!

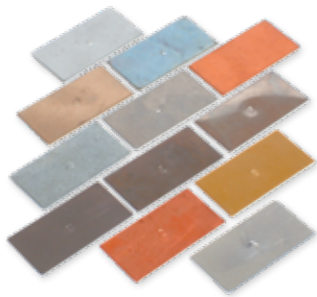
The kit includes all the physical components you need, including learning materials and software, to build the three projects: a self-balancing motorcycle, a webcam controlled rover, and a drawing robot. There's online step-by-step guidance, so it's ideal for students working in small groups or for facilitating remote learning.

735549 \$390.75



PHYSICAL SCIENCE

MAGNETISM



Metal Strip Set

Set includes strips of soft aluminum, hard aluminum, magnetic stainless steel, non-magnetic stainless steel, zinc, zinc plate, nickel silver, bronze, galvanized steel, mild steel, copper and brass, stamped with letter to identify metal. Ideal experiments to demonstrate magnetic properties and classifications of metals. Strip size 5 x 2.5 cm. Pack of 12.

733682 \$19.50



Metal Disc Set

Sets include discs of brass, copper, bronze, nickel silver, mild steel, stainless steel, zinc and aluminium. Ideal for experiments to demonstrate magnetic properties and classifications of metals. Discs are supplied either stamped for identification or blank. Pack of 8.

733686 \$9.50

Ceramic Magnets

Powerful permanent magnets are extra-strong to lift, suspend, hold, and retrieve metal objects many times their own weight. Set of two magnets. 14" H x 7/8" W x 17/8" L.

731454 \$10.65



Horseshoe Magnets

Strong steel magnets painted red with silver poles. North pole marked. Includes keeper.

SB16071M 6" (15 cm) \$7.75

22075 3-Pack, 7.5 cm, 10 cm, and 15 cm magnets.

Horseshoe Magnet with Keeper. \$39.30



Plastic Cased Magnet Bars

Pair of red and blue magnet bars. Approximately 80 mm long. Ideal for demonstration in attraction and repulsion experiments.

03295 \$11.20



Bar Magnets with Keepers

15 cm, Pair.

03240 \$24.50



Bar Magnet with Keepers

5 cm, Pair.

03241 \$12.50

Alnico I Bar Magnets

Powerful, painted magnets excellent for student use to demonstrate magnetic properties and magnetic fields. North-south poles are marked. Sold per pair.

SB26083M 1/4" x 1/2" x 1 1/2" \$9.45

SB14309M 1/4" x 1/2" x 2" \$15.00

SB26084M 1/4" x 1/2" x 2 1/2" \$14.15



Pair of Magnet Bars

Pair of magnet bars in a plastic case. Each measures 12" W x 4-1/2" L. South pole in white and North pole in red. Use to demonstrate magnetic field and electromagnetic phenomenon.

SB47138M \$29.35



Horseshoe Shaped Magnets

Learn where magnets stick and how they work with this set of six 5", durable, plastic horseshoe-shaped magnets. Perfect for small groups or individual learning.

SB38803M \$28.15



Block Magnet Set

Great for general classroom experimentation and discovery, this set features 12 plastic-encased magnets that are colourful and strong. Magnets measure 2" x 1" x 1/2".

SB45570M \$19.85



SB16502M



SB16503M

SB16501M

Ceramic Magnets Classroom Packs

Sets of 12 colour-coded permanent magnets in six different colors (2 each of orange, yellow, red, purple, green, and blue). These magnets have a high efficiency, and are useful for several student activities. Sold as a set of 12.

SB16501M Ring Magnets, 1-1/8" (28 mm) dia. \$13.50

SB16502M Latch Magnets, 3/4" x 1" (19 x 25 mm) \$12.45

SB16503M Block Magnets, 1/4" x 3/4" (6 x 19 mm) \$6.55



Magnet Resource Kit

This convenient classroom kit contains 25 weak and strong magnets in bar, rod, disc and horseshoe form, a magnetic strip, 4 compasses, 250g of iron filings and a piece of lodestone. Teacher's notes are included, with suggestions for classroom activities to study the behaviour and properties of magnets.

08655 \$199.95



Iron Filings in Plastic Bubble

Take the mess out of magnetism! With this set, students can experiment with magnetism without worrying about getting loose filings all over the classroom or themselves. Dimensions: 9.5 cm long x 7 cm wide x 1.4 cm high.

79346 \$4.00

Iron Filings

Discover the invisible lines of force in any magnet! Place a magnet under a sheet of paper. Sprinkle a small amount of iron filings onto the paper and tap gently. The iron filings will have the greatest concentration around the strongest part of the magnet. 12 ounces of iron filings in an easy-to-dispense jar.

77665 \$9.40



Super Strong Magnets, Set of 4

Comes in purple, red, blue, and green. Each button boasts a powerful circular magnet that clings securely to metal surfaces ranging from refrigerators to whiteboards. These Super Strong Magnets also double as organizational tools. Each magnet is 1½" in diameter.

731944 \$22.00



Magnetic Lodestone

A large 1" x 1" magnetic rock, which was made into a magnet by the Earth's magnetic field, allows students to see and experiment with nature's own magnetism.

55178 \$6.50



Magnetic Compass, 20mm

Useful for magnetism experiments. Excellent quality.

03284 \$1.95

732563 Set of 30 \$52.65



Mysterious Magnet Tube

Allows you to explore the mysterious forces of magnetism! Perform experiments that demonstrate magnetic forces and north/south polarity using iron filings and a cylindrical magnet.

56880 \$49.50



Super Magnet

Has tough colour coded outer mouldings (red - North, blue - South). Allows children to safely experience first hand the force of neodymium - currently the World's strongest permanent magnet!

79168 \$42.50

Magnetic Compass, 45mm

Tough plastic cased compass with lanyard, Marked with 4 compass points and full 360 degree scale around its edge.

03285 \$4.30

732664 Set of 30 \$99.95



Iron Filings

250g. Perfect for demonstrating magnetic forces and fields.

02478 \$6.15



PHYSICAL SCIENCE

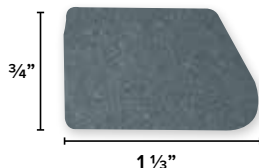
MAGNETISM



Spectrum's Magnetic Resource Kit

This convenient classroom kit contains 25 weak and strong magnets in a bar, rod, disc and horseshoe form, a magnetic strip, 4 compasses, 250g of iron filings and a piece of lodestone. Teacher's notes are included, with suggestions for classroom activities to study the behaviour and properties of magnets. All in a plastic tote. Ideal for 20 - 30 students.

730688 \$169.92



Neodymium Magnets

Neodymium (NdFeB) is the most powerful magnet material in the world. It is classified as an element in the lanthanides section of the periodic table. These are the super strong magnets you have heard about that can attract through your hand! Specially shaped magnet is .47" thick x .75" x 1-1/3".

55034 \$41.35

Magnetic Field Demonstration Plate

This plate is an excellent tool to view magnetic fields. Transparent plate is comprised of a matrix of small circular chambers. Each chamber contains an iron rod and functions independently as a plotting compass. Due to its transparent nature, the plate is suitable for overhead projectors. 9-13/16" x 9-13/16". One-year warranty.

SB48222M \$48.15



Re-Magnetizer

Works with horseshoe and bar magnets. Table or wall mount. Comes with 2 permanent neodymium magnets.

55030 \$85.25



3-D Magnetic Field Demonstrator

Allows students to observe magnetic fields in three as well as two dimensions. This unique device consists of two half hexagonal acrylic containers with metal filings. The two parts, connected with hinges, can be swung open or close. A strong bar magnet is placed between the containers to reveal the cross section of a magnetic field. Dimensions: 5" x 5" x 5".

SB39179M \$42.75

Neodymium Disc Magnets

Super magnets! Neodymium is the strongest magnet material available today. Great for projects or experiments that require a small, very strong magnet. Magnetism guaranteed for life.

12 mm x 3 mm.

0.472" D x 0.118" thick. Pkg. of 6.

SB38463M \$8.65

18 mm x 3 mm.

0.709" D x 0.118" thick. Pkg. of 3.

SB38465M \$10.85

8 mm x 3 mm.

0.315" D x 0.118" thick. Pkg. of 10.

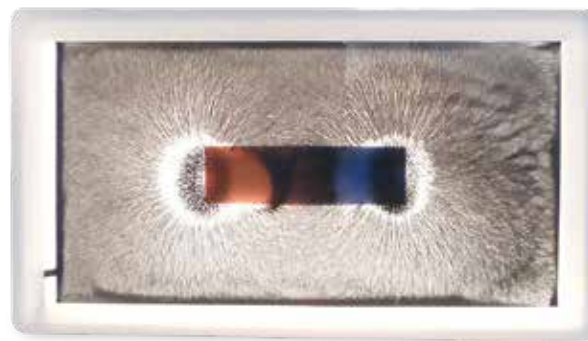
SB38464M \$12.30



Diamagnetic Levitation

Capture your students' imaginations when they see a small graphite plate floating in space above a magnet. Kit dramatically demonstrates how magnets repel certain materials. Includes four neodymium magnets (each 1/4"), a 1/4" graphite plate, and instructions and background information on ferro-, para-, and diamagnetism. NOTE: This kit contains small, powerful, neodymium magnets and should only be used with adult supervision.

SB48975M \$36.15



Magnetic Field Pattern Kit

Perfect for showing magnetic field patterns! The transparent frame contains magnetic particles in a water-based solution. When a magnet is present, the particles of iron inside become slightly magnetized, attracting each other and forming lines that show magnetic field patterns. Kit contains field pattern window, two plastic-cased magnets, two ferrite magnets, and information booklet. CE certified. 8-3/4" L x 4-3/4" W x 3/8" D.

SB4445M \$25.25





Electromagnet Science Set

Fascinate students with the phenomena of electromagnetism as they build an electromagnet and use it to power simple electric assemblies such as buzzers and chimes. Includes all the materials for six projects and a 40-page activity guide with instructions and glossary. For 1-4 students.

SB32806M \$59.45



Economy Magnet Set

An exceptional value! This kit includes a variety of magnets and accessories for teaching the basics of magnetism. Includes steel horseshoe magnet, two ceramic bar magnets, three ceramic donut magnets, four metal squares (iron, copper, aluminum, zinc), iron filings pack, loadstone, two magnetic compasses, and an English/Spanish activity guide containing 17 experiments. Comes in a reusable storage box.

SB31100M \$48.55

Electromagnet Experiment Set

The materials in this set allow students to determine how the strength of an electromagnet is affected by the number of turns in the coil and by the nature of the material that occupies the space inside the coil. The set includes three pairs of coils, 48 mm x 17 mm dia.; and 12 core cylinders, three each of glass, copper, aluminum, and iron. All core cylinders are 55 mm x 5 mm dia.

SB16533M \$296.35



Magnetic Marbles

These plastic cased marbles look like colourful plastic balls, but each one contains a magnet so they stick together, hang together and pull towards and away from each other - as a first introduction to the magical world of magnetism they are great fun. Size: 15 mm dia.

203071 Pkg. of 25 \$9.05

733376 Pkg. of 100 \$39.95



Attracted to Magnificent Magnets

Ms. Frizzle and her students take Young Scientists on a wild ride while becoming attracted to magnificent magnets. Young Scientists go on a magnetic scavenger hunt, build a compass, make magnetic slime, design magnetic faces, experiment with lodestone, play magnetic games, hold magnetic car races, and much, much more! This magnified kit includes a colourful poster with a racing track, game board, and experiment diagrams.

03287 \$29.55



Magnetic Science

Explore the invisible power of magnets with 33 engaging experiments and games. This kit contains many magnets of different shapes and sizes, and a variety of other components with which you can explore this classic scientific subject. Experiment to determine which materials are magnetic and which are not. Learn about magnetic poles and magnetic fields. Discover how Earth behaves like one giant magnet, and how we use compasses to take advantage of this phenomenon to determine which way is north. Conduct a series of experiments to learn first hand how magnets behave and interact under different conditions. Make invisible magnetic fields using iron filings in an enclosed transparent box. Build an electromagnet to learn how electricity relates to magnetism. The full-colour, 48-page manual guides your experiments with illustrated step-by-step instructions.

STEM Magnets Activity Set

STEM lessons are irresistible when you add the excitement of magnets! Learn all about the properties of magnetism in a fun, colourful way. Pieces include horseshoe magnet, magnetic post, maze, 4 colour-coded ring magnets, 2 colour-coded bar magnets, 2 magnetic bugs, and 2 snap-on cars bring investigations to life.

730264 \$59.90



PHYSICAL SCIENCE

MAGNETISM



Classroom Attractions Level 2 Magnet Set

This classroom kit contains: 5 block magnets, 5 ceramic horseshoe magnets, 5 compasses, 5 disc magnets, 5 pencils, 5 Magnet Wands, 5 North/South bar magnets, 5 sets polished steel shapes, 15 ring magnets, demo bar magnet, and a teacher activity guide.

732640 \$118.95

Magnet Mania Kit

Easy activities and a variety of items make this kit a great introduction to the fun and mystery of magnets! Kit includes two magnet wands, ten magnet marbles, 50 counting chips and activity book.

77661 \$29.30



Super Magnet Lab

Includes: 7 wands, 100 chips, 100 coloured paper clips, 10 marbles, 2 bar magnets, 2 ring magnets, 2 mini horseshoe magnets, 1 small plastic horseshoe magnet, activity guide and storage box.

77704 \$65.50

Super Horseshoe Magnet

Large enough for small hands to grasp with ease. Size: 7.1" x 8.3" (18 x 21cm).

79344 \$15.50



Floating Magnets

Set of 5 colour painted ring magnets with a plastic stand to create a floating magnet trick. Children achieve this simply by stacking the rings with like poles facing each other so they repel. Rings measure 123mm x 42mm.

731440 \$11.95

Magnetic Wand

20306 Each
\$1.90

Magnetic Bingo Chips

Package of 100.
79116 \$4.95



Classroom Attractions Level 3 Magnet Set

This classroom kit contains: 5 Alnico bars, 5 Alnico horseshoe magnets, 5 flexible magnet discs, 5 compasses, 5 corks, 5 dowels, 5 nails, 5 Lodestones, 5 pieces, magnetic viewing film, 5 sets iron filings, 5 button magnets, 10 block magnets, 10 disc magnets, demo bar magnet, and a teacher activity guide.

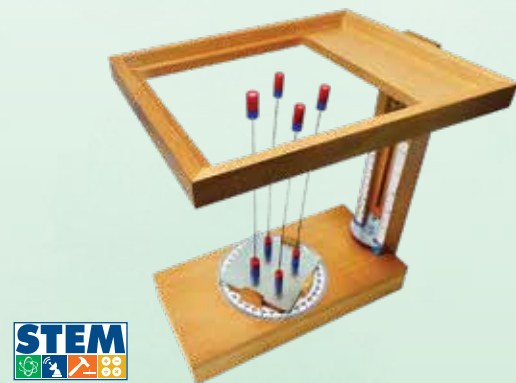
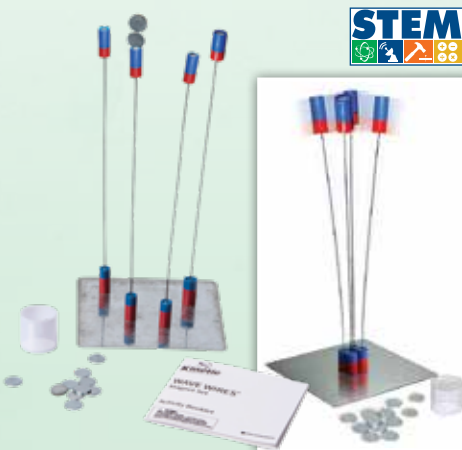
732642 \$178.35



Wave Wires Magnet Station Pack

Features a full-colour, 40-page teacher's guide with lesson plans and photo-illustrated experiments to investigate magnets and their kinetic interactions. Make iron filings dance, propel steel balls inside the viewing tray, create a magnet painting (STEAM), and dangle and oscillate magnet wires upside down! Great for demonstration or up to 4 small groups in classroom labs (grades 3 - 8), STEM programs, science fairs, maker spaces, and more. Includes 16 magnet wires, 48 disc weights, 5 base plates, 4 activation rings, 2 viewing trays, tube of iron filings, tube of steel balls, grid paper, measuring spoon, 4 activity booklets, and 40-page teacher's guide. Station measures approximately 10.19" W x 4.75" D x 11.81" H.

735172 \$137.90



Wave Wires Magnet Station

Features a full-colour, 40-page teacher's guide with lesson plans and photo-illustrated experiments to investigate magnets and their kinetic interactions. Make iron filings dance, propel steel balls inside the viewing tray, create a magnet painting (STEAM), and dangle and oscillate magnet wires upside down! STEM programs, science fairs, maker spaces, and more. Includes 4 magnet wires, 12 disc weights, base plate, activation ring, 2 viewing trays, tube of iron filings, tube of steel balls, grid paper, measuring spoon, and 40-page teacher's guide. Station measures approximately 10.19" W x 4.75" D x 11.81" H.

735170 \$79.90

Wave Wires Magnet Set

Just place the magnet wires on the base, activate them, and watch the unique ways they oscillate as their invisible magnetic forces "bounce" off one another! Great for an individual or 1 small group in classroom labs (grades 3 - 8), STEM programs, science fairs, maker spaces, and more. Includes 4 magnet wires, 12 disc weights, base plate, activation ring, and activity booklet. Magnet wires measure approximately 8.50" H.

735171 \$20.70





Canadian Daily STEM Activities

This must-have resource is ideal to supplement, enhance or enrich any science program! Focus on concepts and skills to enable students to become familiar with Science, Technology, Engineering and Math (STEM) concepts. Students will also be introduced to STEM occupations. Pages are ready-to-go, reproducible and include information, text, experiments, extension activities and teacher pages.

Canadian Daily STEM Grade 1
730844 \$19.95

Canadian Daily STEM Grade 2
730845 \$19.95

Canadian Daily STEM Grade 3
730846 \$19.95

Canadian Daily STEM Grade 4
730847 \$19.95

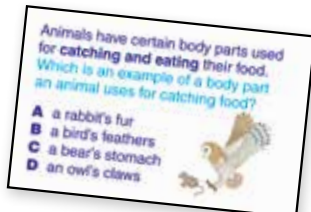
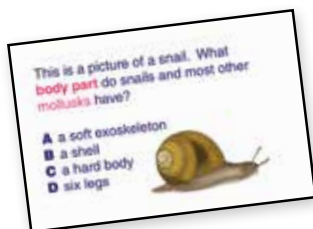
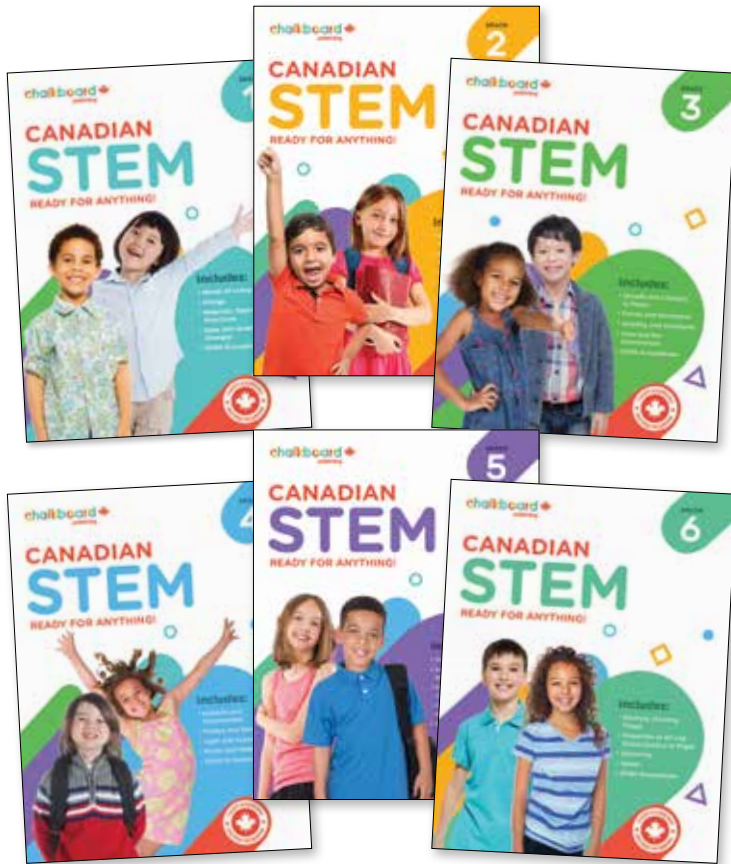
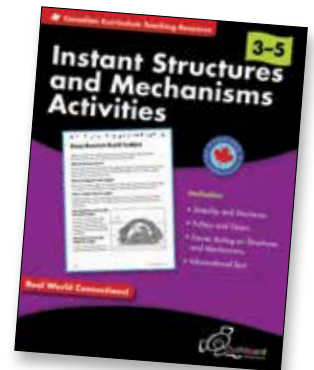
Canadian Daily STEM Grade 5
730848 \$19.95

Canadian Daily STEM Grade 6
730849 \$19.95

Canadian Instant Structures and Mechanisms Grades 3-5

This must-have resource is ideal to supplement, enhance, or enrich any science program at school. Children will become familiar with stability and structures, pulleys and gears, as well as forces acting on structures and mechanisms. This workbook includes informational text alongside easy-to-do experiments and is based on the Canadian curriculum.

730191 \$19.95



Science Learning Centers

Prefect for use in the classroom, after-school programs, or even at home for test preparation or practice and review, each Learning Center provides enough for up to 4 students to work independently or cooperatively on a specific, standards-based topic. Easy-to-setup and easy-to-store in the pouch provided, each center includes 4 visual Learning Guides focused on the same topic providing a graphic overview, "write-on/wipe-off" activities, and guiding assessment review questions. Also includes a 4-player Curriculum Mastery Game including 1 set of 30 illustrated question cards and laminated game board.



Cat. No.	Description	Price
732043	Animal Growth & Reproduction	\$49.85
732040	Cells-Building Blocks of Life	\$49.85
732038	Changes on Earth	\$49.85
732053	Cycles of Life & Biomes	\$49.85
732056	Freshwater & Atmosphere	\$49.85
732051	Electricity & Magnetism	\$49.85
732044	Food Chains & Food Webs	\$49.85
732049	Force, Motion & Energy	\$49.85
732047	Grouping of Animals	\$49.85
732048	Grouping of Plants	\$49.85

Cat. No.	Description	Price
732041	Invertebrates	\$49.85
732054	Landforms, Rocks & Soil	\$49.85
732037	Matter & Its Properties	\$49.85
732055	Newton's Laws of Motion	\$49.85
732045	Rocks, Minerals & Soil	\$49.85
732036	Sound & Light	\$49.85
732052	Six Kingdoms	\$49.85
732039	Solar System	\$49.85
732042	Vertebrates	\$49.85
732050	Weather & Climate	\$49.85



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