

A microscopic image of tissue, likely a histological section, showing various cellular structures and colors. A semi-circular white overlay is positioned over the lower half of the image, containing the main text.

# Life Sciences

Fisher Science Education  
2022 Product Catalog

## Featured Suppliers



CORNING



thermo scientific



fisherbrand



Visit [fisheredu.com/featuredsuppliers](https://fisheredu.com/featuredsuppliers) to learn more about these suppliers and their products.

## Helpful Icons



New product



Must be shipped by truck for regulatory reasons



Meets Americans with Disabilities Act requirements



Protects against splashes from hazardous chemicals or potentially infectious materials



Applicable for remote learning

## Guarantee

If you're not 100% satisfied with your purchase, contact our customer service team within 30 days of your invoice date and we'll either exchange, repair, or replace the product, or give you a credit for the full purchase price. Call us toll-free for a return authorization number.

*Special order items, furniture, and closeouts cannot be exchanged or credited.*

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**Website:** [fisheredu.com](https://fisheredu.com)

**Address:** Fisher Science Education  
4500 Turnberry Drive  
Hanover Park, IL 60133

For international orders, see page 126. All prices are subject to change.

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# Life Sciences

Preparing today's students to be the innovators of tomorrow isn't always easy, but finding the right teaching tools can be. From basic lab supplies to state-of-the-art classroom technology, the Fisher Science Education team has everything you need to create a 21st century STEM learning environment. Visit [fisheredu.com](https://fisheredu.com) to get started.

## Want to customize aspects of your curriculum?

Explore custom kits to meet the unique demands of your classroom. Visit [fisheredu.com/customkitting](https://fisheredu.com/customkitting) to learn more.

## Concerned about shipping and handling fees?

We offer \$12 flat-rate shipping on most orders and our hazardous material fee is just \$15 — the lowest in the country.

## Looking for Something Else?

Check out our other 2022 catalogs:

- Chemicals
- Equipment and furniture
- Lab supplies and consumables
- Physical science
- Safety
- STEM



Around the world, some salt lakes take on a pink or orange hue due to the presence of a green alga called *Dunaliella salina*.

Visit [fisheredu.com/headlinediscoveries](https://fisheredu.com/headlinediscoveries) for more articles and information.

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Visit [fisheredu.com](https://fisheredu.com) to view our full offering of products.



## Lab Equipment & Instruments



### **GUARDIAN™** Hot Plate Stirrers

Designed with outstanding safety and superior performance in mind.

### **PIONEER®** Analytical Balances

Combines essential weighing functionality with competitive performance, offering high accuracy and repeatability.

### **AQUASEARCHER™** pH Meters

Reliable, efficient, and user-friendly Bench Meters with multifunctional touch keypads and large LCD displays.

# THE RIGHT STUFF

OHAUS provides a comprehensive line of equipment and instruments designed for every area of the laboratory, giving you the opportunity to **Do More!** From stirrers to shakers, balances to pH meters, and lifts to clamps, OHAUS has the **Right Stuff** to meet the needs and requirements of every lab.

*Visit [fisheredu.com/ohaus](http://fisheredu.com/ohaus) to learn more.*

***Ingeniously Practical***

**NEW**  
Featured  
Products

**Innovating Science™** by Aldon Corporation  
"cutting edge science for the classroom"



**Learn in Small Groups**

Give your students hands-on experience with a variety of lessons.

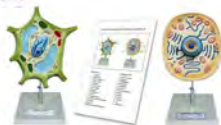
Description	Cat. No.	Price
Innovating Science™ Microbiology Science Fair Kit	S07805	\$17.25
Innovating Science Small Group Learning: Diffusion and Cell Size	S280002	\$17.50
Innovating Science Distance Learning: Cellular Respiration — What Sugar Does Yeast Like Best?	S08201	\$17.25



**Get Larger than Life**

Discover microscopic cell structures with colorful Eisco™ models.

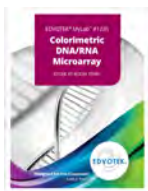
Description	Cat. No.	Price
Eisco Plant Cell Meiosis Models, 16 Pieces	S15022	\$182.00
Eisco Animal Cell Model	S27897	\$184.00
Eisco Plant Cell Model	S27484	\$104.00
Eisco Cell Structure of Root Tip Model	S27487	\$82.00



**Examine Internal Structures**

Discover the inner workings of animal and plant cells with three-dimensional models.

Description	Cat. No.	Price
Supertek™ Animal and Plant Cell Model	S81672	\$94.00



**Find Experiments for Distance Learning**

EDVOTEK™ MyLab™ kits include instructions for up to three runs of each experiment.

Description	Cat. No.	Price
EDVOTEK MyLab Colorimetric DNA/RNA Microarray Kit	S06471	\$35.00
EDVOTEK MyLab Micropipetting Basics Kit	S06463	\$35.00



**Stock Up for Classroom Experiments**

Find dissecting kits, pipettes, pans, and more for your lab.

Description	Cat. No.	Price
United Scientific™ Dissection Kit, Set of 8 with Hard Case	S111009	\$18.50
United Scientific Dissecting Set with 9 Instruments	S111010	\$11.75
United Scientific Polystyrene Petri Dishes	S111107	\$108.00
United Scientific Aluminum Dissecting Pan with Wax	S111022	\$17.25
United Scientific Graduated Disposable Pipettes	S111124	\$53.00
United Scientific Pipette/Instrument Storage Tray	S111120	\$15.00
United Scientific Prepared Microscope Slide Set of 20	S111015	\$43.25

# Need help choosing supplies?

Use this curated list of products to restock your biology classroom, and visit [fisheredu.com](http://fisheredu.com) to find even more science education products.



Description	Quantity	Cat. No.
<b>Dissection Supplies</b>		
Carolina™ Formalin Preserved Sheep Brain, Dura Mater Removed	Each	S28069
Carolina Formalin Preserved Sheep Heart, Plain	Each	S28067
Bio-Fresh™ Frogs	10/Pk	S1635S
United Scientific™ Large Dissecting Tray with Wax	Each	S80769
Science First™ Dissection Pan	Each	S81136
DR Instruments Classroom Dissection Set	Each	S07040
DR Instruments General Biology Dissecting Kit	Each	S06841
Fisher Science Education™ Bio-Fresh™ Concentrate	1 gal.	S6011S
<b>Glass and Plasticware</b>		
DWK Life Sciences Kimble™ ValueWare™ Narrow-Mouth Erlenmeyer Flasks	12/Pk	S00144
PYREX™ VISTA™ Educational-Grade Cylinders	12/Cs	S95186C
DWK Life Sciences Kimble ValueWare Volumetric Flasks, Class A	6/Pk	S00126
Eisco™ Microscope Glass Slide, Plain	50/Pk	S13943
Fisherbrand™ Plain Glass Microslides	144/Pk	S17466A
Fisherbrand Disposable Cover Slips	1000/Pk	S17525C
Fisherbrand Disposable Cover Slips	100/Pk	S17525B
United Scientific™ Plastic Graduated Cylinders, 10 mL, 25 mL, 50 mL, 100 mL, 250 mL, 500 mL, 1000 mL	Each	S01973
Eisco™ Acrylic Buret	Each	S95180A
Polypropylene Beaker Set, 50 mL, 100 mL, 250 mL, 500 mL, 1000 mL	Pack	S400563B
<b>Liquid Handling</b>		
Variable Micropipets	Each	S90243B
Thermo Scientific™ Disposable Transfer Pipets	500/Pk	S304671
Sartorius mLINE™ Pipette Multipacks	Each	S35895
<b>PPE</b>		
Kimberly-Clark Professional™ Kimtech™ Purple Nitrile™ Gloves	100/Pk	S78944
United Scientific™ Lab Coat	Each	S04778
Fisher Scientific™ PVC Apron	Each	S47382A
Fisherbrand 200 Series Safety Glasses	12/Pk	S01822
<b>Cleaning Supplies</b>		
Economy Ultraviolet Goggle Sanitizers	Each	S47604B
Braco Manufacturing Premoistened Lens Cleaning Towelettes	100/Pk	S01814A
Fisherbrand™ Sparkleen™ 1 Detergent	3.25 lb.	S701101
Dynalon™ Kartell™ Pipet/Buret Washer	Each	S31880



**CAROLINA<sup>®</sup>**

# Living Material

The Fisher Science Education team is proud to offer Carolina<sup>™</sup> Biological Supply Company's living specimens. This partnership provides you with:

Extensive Variety | Expert Support | Superior Quality

## Ordering Information

To order live specimens, please call customer service at **1-800-955-1177**.

When you place your order, be prepared to provide a specified delivery date and contact information for the faculty member using the product.

Living organisms are shipped Monday through Wednesday using two-day shipping.

Shipping on Monday for Tuesday delivery is possible but will require expedited, overnight shipping.

Your living materials are guaranteed to arrive on time and in a healthy condition or we will replace them with 100% satisfaction guaranteed.

## Releasing Organisms

Living organisms are offered for educational purposes only. We do not advocate the release of any organism into the environment. In some states, it is illegal to release organisms, even indigenous species, without a permit.

## Restrictions

- **State Shipping Restrictions:** Some living specimens are restricted in certain states. Please see the individual product listing for this information. Some items have substitution recommendations and/or replacement items that can be provided. This will be determined upon receipt of an order.
- **Seasonal Restrictions:** Some living specimens are seasonal and are only available at certain times during the year. Please see the individual product listings for seasonal availability.
- **Hawaii Restriction Notice:** Shipment of living materials (bacteria, algae, plants, protozoa, insects, and other animals) into Hawaii is restricted.

## Prepaid Coupons

You can order living organisms in advance using a prepaid coupon option that allows you to arrange delivery when you are ready.

Pay one flat price that includes the cost of the organism and the shipping fees.

Coupons will not expire and can be redeemed at any time.

Redeem coupons by phone, fax, online, or mail.

To ensure prompt arrival of materials, redeem coupons at least two weeks prior to your requested delivery date.

Living Organisms

LIVING ORGANISMS

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Bacteria

Carolina™ Gram Stain Comparison Set

A selection of five bacterial tube cultures representing Gram-negative and Gram-positive bacteria. This characteristic of bacteria is determined by the make-up of the cell wall, tested by using the Gram-stain method, which is used as the first step in identifying a bacterium.

INCLUDES:

- *Bacillus cereus* (Gram-positive rod)
  - *Serratia marcescens* (Gram-negative rod)
  - *Branhamella catarrhalis* (Gram-negative coccus)
  - *Micrococcus luteus* (Gram-positive coccus)
  - *Rhodospirillum rubrum* (Gram-negative spiral)
  - Pack of 5
- ⚠ Shipping Alert 1

Cat. No.	Description	Price
S07420ND	Gram Stain Comparison Set	64.00/Pk

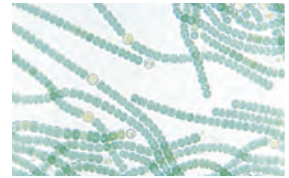


Carolina™ Cyanobacteria Cultures

Cyanobacteria, also known as blue-green bacteria, blue-green algae and Cyanophyta, is a phylum of bacteria that obtain their energy through photosynthesis.

- Low light is 50 to 100 ft. candles of fluorescent light or fluorescent light from the ceiling
  - High light level is 200 to 400 ft. candles of fluorescent light 18 to 24 in. from the culture.
  - Enough material for a class of 30 students
- ⚠ Shipping Alert 1

Cat. No.	Description	Media Type	Price
S07481ND	Oscillatoria	Alga-Gro™ freshwater	9.10/Ea
S07461ND	Anabaena	Alga-Gro™ freshwater	9.10/Ea
S07474ND	Gloeocapsa	Allen's	9.05/Ea



Carolina™ High School Bacteria Collection Sets

Bacteria inhabit soil, water, acidic hot springs, radioactive waste and the deep portions of Earth's crust. There are typically 40 million bacterial cells in a gram of soil and a million bacterial cells in a milliliter of fresh water.



Advanced High School Set (S07415ND)

- 12 tubes
- Cultures grown on nutrient agar except where noted
- *Bacillus megaterium*
- *Branhamella catarrhalis* (brain heart infusion agar)
- *Micrococcus luteus*
- *Pseudomonas fluorescens*
- *Rhodospirillum rubrum*
- *Serratia marcescens*
- *Sporosarcina ureae*

⚠ Shipping Alert 1

Kit represents different chemical and morphological groups:

- *Bacillus megaterium*
- *Branhamella catarrhalis*
- *Clostridium sporogenes*
- *Lactobacillus acidophilus*
- *Micrococcus luteus*
- *Pseudomonas fluorescens*
- *Rhodospirillum rubrum*
- *Serratia marcescens*
- *Spirillum volutans*
- *Sporosarcina ureae*
- *Streptomyces griseus*
- *Vibrio fischeri*

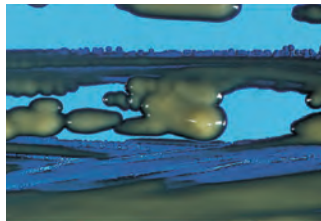
Cat. No.	Description	Price
S07415ND	Advanced High School Bacteria Collection Set	151.00/Pk



## Carolina™ Individual Bacterial Cultures

Bacteria cultures have wide applications in the food and chemical industries because of their highly diverse metabolic activities.

Bacteria are involved in many of the events that make life possible for other organisms, including humans. Fossils of prokaryotes similar to today's bacteria have been found in 3.5 billion-year-old rocks. A mastery of bacteria is the key to understanding life on earth in the past, present, and future.



- Labeled by genus and species name and media on which they are cultured
- All Gram staining based on 24 hr. cultures
- Pure and high-quality
- For every level of study
- Easy-to-use media

### INCLUDES:

- Materials for a class of 30 students
- Carolina™ *Techniques for Studying Bacteria and Fungi* manual

⚠ Shipping Alert 1

Cat. No.	Scientific Name	Media Type	Packaging	Temperature Range	Price
S07423ND	Alcaligenes faecalis	Nutrient Agar	Vial	37°C	20.50/Ea
S07183ND	Bacillus megaterium	Nutrient Agar	Tube	30°C	12.75/Ea
S07424ND	Bacillus subtilis	Nutrient Agar	Vial	30°C	20.50/Ea
S07184ND	Bacillus subtilis	Nutrient Agar	Tube	30°C	12.75/Ea
S07189ND	E.coli Culture	Nutrient Agar	Tube	37°C	13.00/Ea
S07417ND	E.coli Culture	Nutrient Agar	Tube	37°C	13.00/Ea
S07403ND	E.coli MicroKwik Culture™	Nutrient Agar	Vial	37°C	21.00/Ea
S07408ND	Enterococcus faecalis MicroKwik Culture™	Dextrose Starch Agar or Brain Heart Infusion Agar	Vial	37°C	20.50/Ea
S07192ND	Micrococcus luteus Culture	Brain Heart Infusion Agar/ Broth	Tube	25°C	12.75/Ea
S07196ND	Proteus vulgaris	Nutrient Agar	Vial	37°C	20.50/Ea
S07195ND	Pseudomonas aeruginosa	Nutrient Agar	Vial	37°C	20.50/Ea
S07203ND	Staphylococcus aureus	Brain Heart Infusion Agar	Vial	37°C	21.00/Ea
S07405ND	Staphylococcus epidermidis	Nutrient Agar	Vial	37°C	20.50/Ea
S07400ND	Streptococcus pyogenes	Tryptic Soy Agar with 5% Sheep Blood	Vial	37°C	20.50/Ea
S07426ND	Serratia marcescens	Nutrient Agar	Vial	25°C	20.50/Ea
S07201ND	Serratia marcescens	Nutrient Agar	Tube	25°C	12.75/Ea



**Shipping Alert 1:** Because this item is a living or perishable material a specified delivery date is required. Orders must be placed through Customer Service at 1-800-766-7000

## Protists

### Carolina™ Basic Protozoa Set

Watch *ameoba* capturing food, *paramecia* undergoing conjugation and *euglena* doing backflips.

- Three separate cultures

### INCLUDES:

- *Amoeba*
- *Euglena*
- *Paramecium*
- Culturing instructions

⚠ Shipping Alert 1



Cat. No.	Description	Price
S07446ND	Basic Protozoa Set	27.50/Pk

### Carolina™ Individual Protozoa Cultures and Mixtures

Protozoa show students the basic properties of living matter.

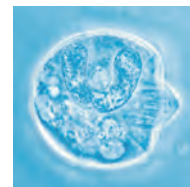
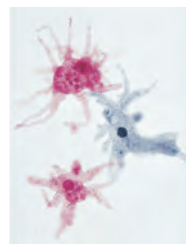
- Pure and uncontaminated cultures
- Cultures arrive ready to use

**Note:** To ensure you order enough living materials for the number of students in your class, order one culture for up to 30 students, two cultures for 31 to 60 students, three cultures for 61 to 90 students, etc.

### INCLUDES:

- Materials for a class of 30 students
- Dropping pipet
- Appropriate medium

⚠ Shipping Alert 1



Cat. No.	Description	Price
<b>Cultures</b>		
S07216ND	Volvox sp.	8.70/Ea
S07222ND	Euglena	8.70/Ea
S07489ND	Volvox globator	8.35/Ea
S07217ND	Amoeba proteus	8.70/Ea
S07219ND	Paramecium	8.35/Ea
S07220ND	Paramecium caudatum	8.70/Ea
S07223ND	Stentor coeruleus	8.70/Ea
S07224ND	Vorticella	9.74/Ea
S07463ND	Chlamydomonas	8.70/Ea
<b>Mixtures</b>		
S07227ND	Protozoan Mixture	16.00/Ea
S07228ND	Protozoa Survey Set	52.00/Ea
S07450ND	Ciliate Mixture	15.75/Ea
S07452ND	Pond Mixture	16.50/Ea
S07453ND	Pond Mystery Mix	13.75/Ea
S07455ND	Protozoa Survey Mixture	17.25/Ea
S07465ND	Chlorella	9.10/Ea

## Carolina™ Protozoa Classification Set

Protozoa, a group of 215,000 described species of flagellates, amoebas, spore formers and ciliates, are excellent tools to help students understand single-celled organisms.



- Includes nine individual cultures representing the three main classes of protozoa

### INCLUDES:

- Sarcodines: *Amoeba*, *Arcella*, *Diffflugia*
- Flagellates: *Euglena*, *Pandorina*, *Peranema*
- Ciliates: *Blepharisma*, *P. bursaria*, *Euplotes*
- Instructions

⚠ Shipping Alert 1

Cat. No.	Description	Price
S07449ND	Protozoa Classification Set	79.00/Pk

## Carolina™ Freshwater Cultures

Collected from Carolina Biological Supply Company's ponds.

- Enough material for a class of 30 students

⚠ Shipping Alert 1



Cat. No.	Description	Storage Requirements	Price
S07469ND	Spirogyra	21°C	10.75/Ea



### BIOTECHNOLOGY

ITS FULL OF LIFE

Visit [fisheredu.com/biotechnology](http://fisheredu.com/biotechnology) for the latest resources, products and training information.

## Fungi

## Carolina™ *Sordaria* Demonstration Cross Plate

A cross of *Sordaria fimicola* wild type and the mutant tan strain for demonstrating genetic crossing-over.



- Easy to perform
- Requires some basic training in microbiology
- One plate

⚠ Shipping Alert 1

Cat. No.	Description	Price
S07440ND	Sordaria Demonstration Cross Plate	31.00/Ea

## Carolina™ Individual Fungi Cultures

Fungi can help you teach many topics in ecology, genetics, biochemistry and other disciplines.

Fungi are important decomposers, helping recycle organic materials in food webs, which makes them great subjects for ecological studies. Students can culture them for genetic studies. For studies in biochemistry, students can investigate the role yeast plays in the production of wine, beer and baked goods.



- Available in tube cultures, plate cultures or MicroKwik Cultures™
- Labeled by name and media on which they are cultivated
- Guaranteed for purity and genera
- Incubate at room temperature (26°C)

### INCLUDES:

- Carolina *Techniques for Studying Bacteria and Fungi* manual

⚠ Shipping Alert 1

Cat. No.	Media Type	Packaging	Scientific Name	Storage Requirements	Price
S07205ND	Potato Dextrose Agar	Tube	<i>Aspergillus niger</i>	20° to 22°C	12.75/Ea
S07437ND	Rabbit Dung Agar	Plate	<i>Pilobolus crystallinus</i>	26°C	16.00/Ea
S07441ND	Cornmeal-Glucose-Yeast Agar	Plate	<i>Sordaria fimicola</i> mutant tan	26°C	16.00/Ea
S07243ND	Potato Dextrose Agar	Vial	<i>Penicillium notatum</i>	26°C	20.50/Ea

**Carolina™ MicroKwik Culture™:** Since a MicroKwik Culture can be refrigerated, you can order it ahead of time for use on short notice.

## Plants

**Carolina™ *Elodea densa***

Your fish can breathe easier with *Elodea densa*, the best of the oxygenating plants.

This vigorous, healthy plant needs good light and should be anchored in soil or sand.

- Cultivated form
- Keeps water conditioned and oxygenated
- Can survive and grow as floating fragments
- Recommended for photosynthesis studies
- With instructions



⚠ Shipping Alert 1

Cat. No.	Description	Quantity	Price
S07500ND	Elodea Tips	15/Container	12.50/Ea
S07497ND	Elodea densa	12/Container	15.50/Pk
S07498ND	Elodea densa	25/Container	16.25/Pk
S07499ND	Elodea densa	50/Container	27.00/Pk
S07496ND	Elodea densa Coupon	12/Container	19.50/Ea

**Note:** Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, Online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.

**Carolina™ Duckweed**

Duckweed are small plants that often cover the water like a green carpet.



- *Lemna minor*
- Monocot
- Unit contains 100 to 150 plants
- With instructions

⚠ Shipping Alert 1

Cat. No.	Description	Price
S07493ND	Duckweed	10.75/Pk

**Carolina™ Liverwort Set**

It is estimated that there are about 9000 species of liverworts.

**INCLUDES:**

- 4 different liverworts (genera may vary seasonally)
- Marchantia Life Cycle Bioreview™ Sheet

⚠ Shipping Alert 1



Cat. No.	Description	Price
S07511ND	Liverwort Set	34.75/Pk

**Carolina™ Coleus**

An especially good specimen for starch-iodine reaction studies, to show absence of photosynthesis in non-green areas.

- White variegated
- Vigorous clone
- Easy to propagate from stem cuttings
- One Plant

⚠ Shipping Alert 1



Cat. No.	Description	Price
S07550ND	Coleus	11.25/Ea

**Carolina™ Tropical Fern Set**

Ferns reproduce via spores and have neither seeds nor flowers. Most ferns have what are called fiddleheads.

**INCLUDES:**

- A set of five different tropical fern
- Interesting forms such as: Boston fern, Staghorn fern, Korean rock fern, Button fern, Lemon button fern, Silver lace fern, Bird's nest fern, etc., may be included

⚠ Shipping Alert 1



Cat. No.	Description	Price
S07571ND	Tropical Fern Set	55.25/Pk



**Shipping Alert 1:** Because this item is a living or perishable material a specified delivery date is required. Orders must be placed through Customer Service at 1-800-766-7000

## Animals

## Invertebrates

## Carolina™ Hydra, Planaria and Daphnia Review Set

Observe the similarities and differences between some of the most popular invertebrates.

### INCLUDES:

- A separate culture of *Hydra*, *Planaria* and *Daphnia*
- A pad of 30 Bioreview™ Sheets for each
- Instructions for culturing each form



⚠ Shipping Alert 1

Cat. No.	Description	Price
S07594ND	Hydra, Planaria, and Daphnia Review Set	49.00/Pk

## Carolina™ Daphnia pulex

*Daphnia pulex* is the most common species of water flea.

*Daphnia pulex* is an easy-to-grow food source for hydra and small fish.

- For a class of 30 students
- Recommended for environmental studies
- Prolific: grow to feed your fish



### INCLUDES:

- Several instars (including large forms with eggs)

- Instructions

⚠ Shipping Alert 1

Cat. No.	Description	Price
S07269ND	Daphnia Pulex	11.00/Ea

**Note:** Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, Online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.

## Carolina™ Daphnia magna

Cultures of *D. magna* contain adults, juveniles, and neonates.

- For a class of 30 students
- A large species of *Daphnia*
- Commonly used in aquatic effluent toxicity testing
- An obligate algal feeder
- Cultured using powdered *Spirulina* as a food source



⚠ Shipping Alert 1

Cat. No.	Description	Price
S07268ND	Daphnia Magna	11.75/Ea
S07268CND	Daphnia Magna Coupon	24.75/Ea

**Note:** Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, Online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.

## Carolina™ Hydra

An underwater wonder!

Generally, the brown hydra species shipped is *Hydra littoralis*. Specimens are freshly collected to ensure maximum natural size and optimum physiological condition.



- Easily maintained in a freshwater aquarium
- For a class of 30 students
- Needs no filtration or aeration system
- Reproduces rapidly when fed daily

⚠ Shipping Alert 1

Cat. No.	Description	Price
S07265ND	Hydra	10.50/Ea

**Note:** Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, Online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.

## Carolina™ Planaria

Witness how planaria can grow new heads and tails.

- Great for regeneration and memory studies
- Affordable
- Easy to culture
- For a class of 30 students
- A single species or color is selected based on availability
- With instructions



Includes pre-paid coupon to order living material at a future date. Carolina™ Planaria, Living Material Coupon is sufficient for class of 30 students.

⚠ Shipping Alert 1

Cat. No.	Description	Price
S07590ND	Planaria	11.75/Ea
S37298	Planaria, Living Material Coupon	19.75/Ea



**Shipping Alert 1:** Because this item is a living or perishable material a specified delivery date is required. Orders must be placed through Customer Service at 1-800-766-7000

## Carolina™ Brown Planaria

### Regenerating Wonders!

The size of this planarian varies with the season. Smaller forms are more prevalent in early spring; larger or mature forms are evident throughout remainder of year.

- Great for regeneration and memory studies
- Easy to culture
- Affordable
- For a class of 30 students
- With instructions



⚠ Shipping Alert 1

Cat. No.	Description	Price
S07229ND	Brown Planaria	11.75/Ea

## Carolina™ Mixed Rotifers

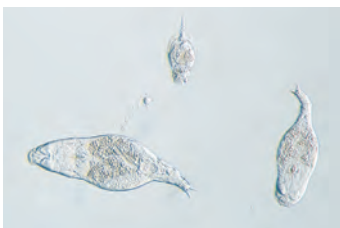
Commonly called wheel animals.

- For a class of 30 students
- Equal numbers of both species in a single culture

### INCLUDES:

- A mixture of *Monostyla* and *Philodina*

⚠ Shipping Alert 1



Cat. No.	Description	Price
S07231ND	Mixed Rotifers	11.50/Ea

## Carolina™ *Caenorhabditis elegans* N2

*Caenorhabditis elegans* completes its life cycle in three days, developing from egg through four larval stages to adult.

- Wild-type strain
- Extensively used for genetic studies
- Aseptically maintained on Nematode Growth Agar with *E. coli* as the feeder host



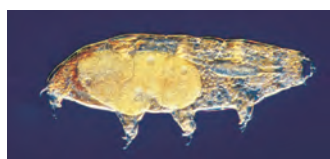
⚠ Shipping Alert 1

Cat. No.	Description	Price
S07601ND	<i>Caenorhabditis elegans</i> N2	16.25/Ea

## Carolina™ Water Bears

Cryptobiotic (inactive) forms may be made by dehydration and can be reanimated during class for student observation or about an hour before needed.

- Tardigrades are supplied in an active form, and are sometimes known as water bears
- For a class of 30 students



⚠ Shipping Alert 1

Cat. No.	Description	Price
S07592ND	Water Bears (Tardigrades)	15.25/Ea

## Carolina™ Earthworms

Students can find these tube-shaped, segmented animals living in soil and feeding on live and dead organic matter.

- *Lumbricus terrestris*
- Large, mature specimens are suitable for laboratory study and dissection
- Medium-sized specimens are not suitable for dissection, but are good for making slides and for use as food for snakes and large salamanders
- With instructions
- Pack of 25



⚠ Shipping Alert 1

Cat. No.	Description	Price
S07271ND	Earthworm	23.00/Pk

## Carolina™ Pond Snails

Popular medium sized snails for aquariums and hands-on activities.

- With instructions
- Container of 12

⚠ Shipping Alert 1



Cat. No.	Description	Price
S07278ND	Pond Snail	16.75/Pk

## Carolina™ Terrestrial Isopods

They're crustaceans that live on land - yet breathe through gills!

Sow bugs are fantastic examples of environmental adaptation.

*Porcellio* (sow bugs) will play dead or run away when disturbed. *Armadillidium* (pill bugs) roll into a protective ball when nudged.

- Easy to care for in a moist environment
- Great for teaching evolution, adaptation, behavior, and much more
- Field collected
- With instructions
- Pack of 50



⚠ Shipping Alert 1

Cat. No.	Description	Price
S07274ND	Sow Bug	42.25/Pk
S07654ND	Pill Bug	43.00/Pk
S07274CND	Sow Bug Coupon	53.50/Ea

**Note:** Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, Online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.

## Carolina Biological™ Lady Beetle 10-Larvae Culture

Observe all 4 stages of complete metamorphosis with lady beetle larvae.

- Alligator-like larvae grow, pupate and metamorphose in 10 to 14 days.
- At least 5 of the 10 to 15 larvae guaranteed to emerge as healthy adult lady beetles.

**Note:** Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, Online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.



Cat. No.	Description	Price
S72460	Live Specimen Beetle Larvae	19.50/Ea
S72461	Live Specimen Beetle Larvae (with Prepaid Coupon)	28.50/Ea

## Giant Butterfly Garden with Caterpillar Certificate

Experience the metamorphosis of caterpillars into Painted Lady Butterflies five times.

- Collapsible and reusable
- 18 in. Deluxe Habitat
- Easy to maintain
- Oversized stages figures for little hands

An additional \$7.95 fee is required to redeem the certificate.

### ORDERING INFORMATION:

Redeem certificate for five caterpillars



### INCLUDES:

Pipette for butterfly feeding, extensive instructions, Painted Lady Butterfly life cycle stages figures

Cat. No.	Description	Price
S65044B	Giant Butterfly Garden With Caterpillar Certificate	3.85/Ea

**Shipping Alert 1:** Because this item is a living or perishable material a specified delivery date is required. Orders must be placed through Customer Service at 1-800-766-7000

## Cup of Caterpillars Prepaid Voucher

Prepaid voucher for a Cup of Caterpillars is a refill for Original Butterfly Garden (S17575) on page 16 or Giant Butterfly Garden (S65044B) disc.

- Redeem it for one cup of 5 caterpillars and all the caterpillar food they need to grow into beautiful butterflies
- Price includes express delivery of caterpillars
- Recommended for ages 4 and up with adult supervision



Cat. No.	Description	Price
S65044A	Refill Voucher for a Cup of Caterpillars	23.00/Ea

## Carolina™ Painted Lady Butterfly Larvae Sets

Teach the concept of butterfly life cycles

The larvae pupate and emerge as adult butterflies in as little as three weeks. Witnessing metamorphosis is an experience that students never forget!

- Kits include sufficient food to enable larvae to emerge as adult butterflies.
- Store at 22° to 25°C

### 5-Larvae Culture Kit:

- 8 oz. cup with food
- Five *Vanessa cardui* butterfly larvae
- Larvae care instructions

### 33 Larvae Culture Kit:

- 1 cup of 33 larvae
- 1 cup of food

### 60 to 75 Larvae Culture Kit:

- 2 cups with a total of 60 to 75 larvae
- 2 cups of food



**Note:** Additional larvae are supplied with each Larvae/ Food Set to ensure that at least the specified amount of larvae emerge as healthy adults. Extra food must be purchased if you wish to maintain additional larvae.

**Shipping Alert 1**

Cat. No.	Description	Price
S07704ND	Painted Lady Butterfly 5 Larvae Culture	18.75/Pk
S07705ND	Painted Lady Butterfly 5 Larvae Culture Coupon	28.00/Ea
S07710ND	Painted Lady Butterfly Culture 33 Larvae Set	55.50/Pk
S07711CND	Painted Lady Culture 33 Larvae Set	65.25/Ea
S07706ND	Painted Lady Butterflies, 60-75 Larvae Set	90.50/Pk

**Note:** Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, Online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.

## Carolina™ Individual Butterfly Kit

Raise butterflies in your home or classroom while learning about metamorphosis with the Carolina™ Individual Butterfly Kit.

Easy to use. Easy to raise.

- Comes with live butterfly larvae, pop-up habitat, feeder and instructions
- Perfect for all ages.

⚠ Shipping Alert 1



Cat. No.	Includes	Price
S28870	Individual Butterfly Kit	38.75/Ea

## Carolina™ Butterflies in the Classroom Kit

These kits make keeping live butterflies simple, fun and affordable.

This kit allows students to work hands-on with living butterflies. From a culture cup that contains 33 larvae and food, each student (or pair of students) transfers a larva and food to its own culture vessel, creating an individual chamber for observation. The provided habitat is simple to set up, easy to clean, great for viewing and collapses for convenient storage.



### INCLUDES:

- Painted Lady Butterfly Culture (33 larvae with food)
- Painted Lady Butterfly Culture Medium (food)
- Carolina Butterfly Sanctuary
- 33 1 oz. cups with lids
- Five wooden craft sticks
- Five sorting brushes
- 10 Kimwipes™
- Foam flower
- Cotton wick
- Teacher's Manual and Reproducible Student Guide

### REQUIRES:

Spray bottle; small bottle or vial; sugar; water; food coloring (optional); host plants (mallow, thistle, daisy, etc. optional)

⚠ Shipping Alert 1

Cat. No.	Description	Price
S07707ND	Butterflies in the Classroom Kit (with Live Caterpillars)	74.75/Ea
S07708ND	Butterflies in the Classroom Kit (with Prepaid Coupon)	80.00/Ea
S28651	Butterflies In The Classroom Kit Refill	52.25/Ea.

## Carolina™ Mealworms

The adult mealworm lays hundreds of eggs and is the best stage to start a balanced culture. Larvae are ideal food for lizards, salamanders, turtles, and frogs.

- *Tenebrio*
- Pupae metamorphose into adults in about two to four weeks
- With instructions
- Package of 100

⚠ Shipping Alert 1



Cat. No.	Description	Price
S07275ND	Mealworm	14.00/Pk

**Note:** Prepaid coupons allow you to order your organisms in advance. We'll send a coupon(s) that you later redeem by phone, fax, Online web form, or mail. To ensure prompt arrival of material, coupons must be redeemed at least 2 weeks prior to requested delivery date.



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## Vertebrates

## Grow-A-Frog Kit

Visualize metamorphosis with this amazing kit.



Unique clear-skinned tadpoles allow students to watch the growth of the tadpole into a frog inside as well as outside.

**INCLUDES:**

- Plex-Aquarium:  
4.4 × 3.6 in. (11 × 9cm)
- Nutri-Rocks
- Underwater landscape
- Vitamin-rich growth food
- Fun 'n' Fact Handbook
- Coupon for one Grow-A-Frog tadpole

Cat. No.	Description	Price
S19118A	Grow A Frog Kit	32.75/Ea

## Carolina™ Marine Fish Set

Add these exciting fish to your classroom aquarium.

- A selection of 11 fish specially selected for a classroom community marine tank

**INCLUDES:**

- Typical fish like: Chalk basslets, Royal grammas, Clown gobies, Watchman gobies, Damselfish, and Blennies



⚠ Shipping Alert 1

Cat. No.	Description	Price
S07261ND	Marine Fish Set	171.00/Ea



**Shipping Alert 1:** Because this item is a living or perishable material a specified delivery date is required. Orders must be placed through Customer Service at 1-800-766-7000

## Carolina™ Largemouth Bass

These fish are very hardy in aquaria maintained at controlled room temperatures.



Can be used in aquaria and outdoor pools and for toxicity studies.

- Length ranges from one to three inches (length of a fish includes the tail fin)
- With instructions
- Container of 3

⚠ Shipping Alert 1

Cat. No.	Description	Price
S07713ND	Largemouth Bass	33.75/Pk

## Carolina™ Blue Channel Catfish

A slender, bluish-gray fish that is a good bottom scavenger.

These fish are very hardy in aquaria maintained at controlled room temperatures.

- *Ictalurus punctatus*
- Popular aquaculture species
- Length ranges from one to two inches (length of a fish includes the tail fin)
- With instructions
- Container of 3



**Note 1:** Restricted in Alaska, Oregon and California. Permit required prior to purchase in Nevada and Virginia.

**Note 2:** These fish do not ship well during hot weather.

⚠ Shipping Alert 1

Cat. No.	Description	Price
S07715ND	Blue Channel Catfish	24.50/Pk



## Animal Collection and Habitats

## Eisco™ Polycarbonate Aquarium Tank

Polycarbonate aquarium tank features the clarity of glass with the durability and safety of plastic. Made from tough polycarbonate plastic, it is crack resistant and also carries a natural UV filtering quality.

- One piece molded polycarbonate plastic aquarium tank
- Use for terrarium, aquarium, or insect habitat
- Transparency provides excellent visibility
- UV protectant



Cat. No.	Description	Price
S26596	1.75 gal.	20.25/Ea
S26603	0.75 gal.	11.50/Ea

## Student Project Tanks

Student Project Tanks constructed of clear polycarbonate are designed to not crack or break.

- Molded of a shatter-resistant polycarbonate material that resists scratches, dents, and clouding-up
- For long term classroom use
- Tanks and lids also naturally resist many acids and oils to maintain a clear student view
- Easy to clean and maintain
- Can withstand the abuse of daily classroom use
- Includes: 1 PC clear tank 1 PC clear lid, 1 PC clear drain shelf, 2 solid polyamide plugs, 2 vented polyamide plugs, 2 clear plastic/SS clamps
- Pop-out plugs are supplied both as solid and vented allowing versatility in use
- Included clamps will secure down the lid
- Tank accessory pack includes 2 of each plug and 2 plastic clips



Cat. No.	Description	Price
S30678	3.79 L	18.75/Ea
S30765	11.35 L	36.75/Ea

## Synthetic Sea Salt

Dissolves and mixes quickly and easily.

- Carefully formulated
- This universally preferred sea salt is the number one choice of hobbyists public aquariums and scientific research facilities
- High quality and dependable
- Makes 50 gallons



Cat. No.	Description	Price
S81800	Synthetic Ocean Salt	39.00/Ea

## Eisco™ Insect Collecting Net

Strong enough for student activities.

- 11.8 in. dia. (30cm) iron wire ring with 9.8 in. dia. (25cm) net opening
- 29.5 in.L (75cm) aluminum or wooden handle with fine grip at end
- 2 in. (5cm) wide cloth rim



Cat. No.	Description	Price
S95939	Aluminum Handle	52.00/Ea
S95935N	Wooden Handle	39.25/Ea

## Eisco™ Sweeping Net

Eisco™ Sweeping Net designed for sweeping vegetation to collect insects features a light weight aluminum handle with rubber grip.

- Sweeping net used to collect insects from vegetation
- 10 in. Diameter frame
- 12 in. deep nylon net
- 36 in. lightweight aluminum handle with rubber grip
- Great durability



**WARRANTY:** 1 year limited manufacturer warranty

Cat. No.	Description	Price
S29348	Sweeping Net	31.75/Ea

## Eisco™ Insect Collecting Nets

For safely collecting insects.

- Net for catching insects
- 12 in. diameter net with wire ring
- Net is 31 in. deep

**WARRANTY:**

1 year limited manufacturer warranty



Cat. No.	Description	Price
S29533	Insect Collecting Net	23.25/Ea

## Eisco™ Insect Collecting Net

Strong enough for student activities.

- 11.8 in. dia. (30cm) iron wire ring with 9.8 in. dia. (25cm) net opening
- 29.5 in.L (75cm) aluminum or wooden handle with fine grip at end
- 2 in. (5cm) wide cloth rim



Cat. No.	Description	Price
S29344	Length: 106 cm	36.75/Ea

## Ladybug Land

Discover the land of the ladybugs.



- Watch ladybugs grow from larvae to adults
- Dimensions (L x W x H): 10 x 7.5 x 8 in. (25 x 18.8 x 20cm)

**ORDERING INFORMATION:**

Grades PreK+. Allow two weeks for delivery. Available in continental U.S. and Alaska only. Redemption fee applies when certificate is mailed in. Postage and handling fee required.

**INCLUDES:**

- Sturdy plastic habitat base
- See-through magnifier plastic dome cap
- Instructions
- Mail-in certificate for 15 to 20 pink-spotted ladybug larvae and special food

Cat. No.	Description	Price
S79118	Ladybug Land	3.85/Ea

## Original Butterfly Garden and Butterfly Pavilion

Raise butterflies while learning all about metamorphosis in a classroom or at home.

An award-winning butterfly garden that allows students to watch caterpillars transform into Painted Lady butterflies and explore, eat, spin silk and grow up to 10 times their original size. Adult butterflies can be released into the wild. For ages 4 and up with adult supervision.



**Includes:**

- Feeding pipette
- Pop-up, reusable 11.5 in. tall mesh habitat
- Caterpillars to Butterflies Instruction Guide
- Voucher for a cup of 5 caterpillars and all the nutritious food they need to develop into adult butterflies (please note that an additional \$7.95 fee is required for shipping and handling of your newborn caterpillars)
- 3 of the 5 caterpillars are guaranteed to develop into adult butterflies
- After transforming into butterflies, unzip the top to set the butterflies free
- Dimension: 12 x 3 x 12 in. (30.4 x 7.6 x 30.4cm)

Cat. No.	Description	Price
S17575	Original Butterfly Garden with Voucher	20.00/Ea



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## Learn More

Specimens are fixed with formaldehyde and then repeatedly washed in Bio-Fresh solution to reduce residual formaldehyde. Every specimen meets or exceeds OSHA standards for formaldehyde in the lab. **See p. 43** for concentrated solution. Look for the Bio-Fresh name on a variety of specimens beginning on **p. 18**.

### Identify Major Systems

- Single injected: Red latex in the arterial system
- Double injected: Blue latex in venous system, red in arterial system
- Triple injected: Yellow latex in the hepatic portal system, blue in the venous system, and red in the arterial system

### Safety, Storage, and Disposal

- Specimens meet or exceed OSHA formaldehyde standards of less than 0.75ppm for eight hours of exposure in a ventilated lab space
- Refrigeration is not necessary, but extreme temperatures (low and high) should be avoided
- Keep vac-packs sealed until needed, then store specimens in Bio-Fresh holding solution for reuse
- Disposal is simple — treat specimens and liquids like any other solid and liquid waste
- Always follow your area's guidelines for disposal, dumping, or incineration

### Packaging and Labeling

- Most specimens are available in pails or vacuum-sealed plastic bags
- Some smaller specimens come in jars, where indicated

### Bio-Fresh Pails

- Filled with Bio-Fresh preservative for safe shipping and easy storage of specimens
- Ideal for specimens intended for reuse
- Contents, lot numbers, and production dates are printed on every label
- Due to the weight of the liquid, special shipping charges apply

### Vac-Packs

- Good solution for customers who already have storage methods (pails, plastic bags, etc.)
- Individually packaged specimens are very convenient and easy to distribute to students
- Smaller specimens such as grasshoppers and sheep eyes come in packs of 10 to reduce waste
- Heat sealed with three layers of impermeable plastic and stamped with a production date and lot number

**The Fisher Science Education team is committed to providing the highest quality specimens and service.**

- All biological specimens are guaranteed for one year
- Receive a full credit on any defective merchandise
- Call Fisher Science Education customer service at **1-800-955-1177** for more information

### Specimen Acquisition

We recognize the role that respect for life and the environment play in biology education, which is why only humane and socially acceptable methods of collection are used for the specimens you'll receive. We select suppliers who are in strict accordance with all government guidelines and regulations, and who have all necessary permits for obtaining, processing, and transporting specimens. Endangered, threatened, and protected wildlife will never be sold.

Before You Buy Preserved Specimens

Preserved Specimens

Invertebrates

## Delta Bio™ Clam Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit allows 1 to 2 students to study the clam, a simple species that allows for careful observation and introduction to dissecting.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.



Cat. No.	Includes	Price
S81540	Fresh water clam, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	22.00/Ea
S81541	Fresh water clam, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	15.50/Ea

## Carolina™ Formalin Quahog

For use in exploring anatomy of marine clams. Carolina™ Formalin Quahog is ideal for studying bivalve anatomy.

- Venus sp.
- Large, thick-shelled marine clams
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde

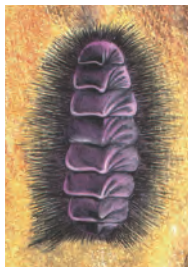


Cat. No.	Description	Price
S37690*	Formalin Quahog	34.50/Ea

## Delta Bio™ Bio-Fresh™ Clams

Bio-Fresh™ Clams

- Packed in Preservative
- Large, 4 to 5 in.
- Pail packaging
- Pack of 10



Cat. No.	Description	Price
S5002P	Mollusca Clam	25.75/Pk

## Carolina™ Formalin Blue Crab

Carolina™ Formalin Blue Crab is ideal for exploring the anatomy of an advanced crustacean in the classroom. Great for invertebrate and comparative anatomy classes.

- Blue Crab (*Callinectes* sp.)
- Great for studying crustacean anatomy
- Preserved in formalin
- Shipped 10 per pail
- Shipped in Carosafe™ Carolina's proprietary shipping and holding fluid
- Carosafe minimizes student and educator exposure to formaldehyde



Cat. No.	Description	Price
S72736	Formalin Blue Crab	56.75/Ea

## Crayfish Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit introduces 1 to 2 students to the crayfish's anatomy.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.



Cat. No.	Includes	Price
S81528	Crayfish, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	19.00/Ea
S81529	Crayfish, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	15.50/Ea



\* California - WARNING: Cancer [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*\* California - WARNING: Reproductive Harm [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*\*\* California - WARNING: Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

### INJECTION KEY

**Plain:** Circulatory system not injected with colors

**Single:** Arteries injected with red latex

**Double:** Arteries red, veins blue

**Triple:** Arteries red, veins blue and hepatic portal veins yellow

## Carolina™ Formalin Crayfish

For use in exploring relationship between structure, function, and environment using formalin-preserved crayfish. Carolina™ Formalin Crayfish is ideal invertebrate dissection specimen.

- Pacifastacus sp.
- Phylum Arthropoda, class Crustacea
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde



Cat. No.	Description	Price
S37695*	Formalin Crayfish	13.25/Ea

## Delta Bio™ Crayfish

*Cambarus sp.*

One of the most popular arthropod dissection specimens. They are inexpensive and large and their internal organs are easy to observe. Single-injected specimens have the heart, arteries and gills filled with colored latex.

- Louisiana Lubber Grasshoppers
- Length 4 to 6 in.
- Package of 10
- Pain Injection
- Large Size



Cat. No.	Description	Price
S400210	Crayfish	23.25/Pk

## Delta Bio™ Annelida

Segmented worms, Oligochaeta for dissection.

- A variety of organisms that illustrate different biological phenomena
- Choose from segmented worms which are hermaphroditic or separate sexes
- In alcohol or Bio-Fresh™ solution where noted
- Pain injection
- Package of 10



Cat. No.	Description	Length	Price
S1065SAB	Earthworm	8 to 10 in.	14.75/Pk
S5100S*	Annelida Segmented Worm	10+ in.	20.50/Pk



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## Delta Bio™ Earthworms

To study about segmentation of metameric body plan in worms.

- Quality specimens with well developed clitellum
- Available in wet pack pails or jars only
- Stored and shipped in non-formaldehyde holding solution
- Package of 100



Cat. No.	Description	Price
S14154	100 Earthworms	94.00/Pk

## Carolina™ Formalin Grasshoppers

Carolina™ Formalin Grasshoppers are an excellent introductory specimen for dissecting and studying insect anatomy

- Louisiana Lubber Grasshoppers (Romalea microptera or Brachystoma)
- Perfect introductory dissection specimen
- Large size is perfect for studying specialized external and internal anatomy
- Preserved in formalin
- Shipped 10 per jar
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid which minimizes student and educator exposure to formaldehyde



Cat. No.	Injection Type	Price
S72459*	Plain	8.30/Pk
S72737	Single	30.75/Ea

## Carolina™ Formalin Lamprey

Carolina™ Formalin Lamprey is for use in examining the anatomy of the jawless fish. Ideal for comparative anatomy classes and discussions about common ancestry and diversity.

- Member of class Agnatha
- Mature specimens
- Characteristics: jawless vertebrate, paired gill openings, no paired fins, well developed eyes
- Shipped in Carosafe™ Carolina's proprietary shipping and holding fluid
- Carosafe minimizes student and educator exposure to formaldehyde
- Plain



Cat. No.	Description	Price
S72733	Formalin Lamprey, Plain, 1 Per Bag	15.00/Ea

## Delta Bio™ Squid Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit introduces 1 to 2 students to animal anatomy through the dissection of a squid, an ideal invertebrate specimen with unique structures.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Description	Price
S81526	Squid, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	25.00/Ea
S81527	Squid, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	13.50/Ea

## Carolina™ Formalin Squid

For use in exploring form and function of cephalopods. Carolina™ Formalin Squid is complex mollusk with tentacles, arms, and well-developed eye.



- *Loligo pealeii* or *Illex illecebrosus*
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde

Cat. No.	Length	Injection Type	Price
S37627*	Up to 8 in.	Plain	3.50/Ea
S37625*	8 to 12 in.	Plain	5.55/Ea
S37622*	12+ in.	Plain	7.60/Ea
S37626*	8 to 12 in.	Single	7.70/Ea
S37623*	12+ in.	Single	9.75/Ea

## Delta Bio™ Squid

*Loligo sp.*

- One of the most developed mollusks
- With well-developed eyes, the squid is a predatory and extremely active animal
- Used for grasping small fish and feeding their horny beaks, their tentacles are highly modified homologues of the clam or snail "foot"
- Package of 10



Cat. No.	Length	Quantity	Injection Type	Price
S3072S*	5 to 8 in.	200/CS	Plain	43.75/Pk
S3094S*	5 to 8 in.	10 Pack	Single	51.75/Pk
S3056S*	12 to 16 in.	50/CS	Plain	105.00/Pk
S5105*	8 to 12 in.	10 Pack	Plain	71.75/Pk

## Delta Bio™ Starfish Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit allows 1 to 2 students to explore the anatomy of the starfish.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.



Cat. No.	Description	Price
S81525	Starfish, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	19.50/Ea
S81524	Starfish, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	22.25/Ea

## Carolina™ Formalin Starfish

For use in study of invertebrate anatomy. Carolina™ Formalin Starfish is ideal introductory dissection specimen.



- *Asterias* or *Pisaster* sp.
- Representative echinoderm
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde
- 6-8 inches
- Bag of 5

Cat. No.	Description	Price
S37697*	Formalin Starfish	13.00/Ea

Vertebrates

## Delta Bio™ Comparative Vertebrate Anatomy Kit

Comprehensive dissection kit designed for distance learning. Each kit allows 1 to 2 students to study variety of vertebrates and compare their unique anatomies.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Shark, Grassfrog, Rat, Fetal pig, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Description	Price
S81550	Comparative Vertebrate Anatomy Kit	72.50/Ea

Amphibians

## Delta Bio™ Advanced Frog Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit introduces 1 to 2 students to basic vertebrate anatomy by dissecting a frog.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Description	Price
S81508	Bullfrog, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	44.50/Ea
S81509	Bullfrog, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	36.75/Ea

## Carolina™ Formalin Bullfrogs

For use in introducing students to vertebrate anatomy. Carolina™ Formalin Bullfrogs are ideal for studying amphibian anatomy, adaptations, and body systems.



- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde

Cat. No.	Injection Type	Price
S37638*	Plain	16.75/Ea

## Delta Bio™ Bullfrogs, Bio-Fresh™

*Rana catesbeiana.*

- Provides students with a good specimen for an in-depth dissection study of amphibians
- Animals injected with colored latex to identify arteries and veins are available
- Preserved in Bio-Fresh™ solution



Cat. No.	Injection Type	Length	Quantity	Price
S1354S*	Single	4 to 5 in.	Each	9.15/Ea
S170510*	Plain	6 to 7 in.	10 Pack	170.00/Pk
S170750*	Double	6 to 7 in.	50 Pack	916.00/Pk of 50

### INJECTION KEY

- Plain:** Circulatory system not injected with colors
- Single:** Arteries injected with red latex
- Double:** Arteries red, veins blue
- Triple:** Arteries red, veins blue and hepatic portal veins yellow

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## Delta Bio™ Frog Economy Class Dissection Packs



Economy Class Pack includes 30 specimens and a set of 15 dissection guides, all at one economical price.

- Frog Pack: 4- 5 in. plain grassfrogs; *An Illustrated Dissection Guide to the Frog* (16 pgs.)

Cat. No.	Description	Includes	Price
S06928	Frog Economy Class Pack	Three ten packs of 4 to 5 in. plain Grassfrogs, fifteen copies of 16 page and 14 figure guides set	268.00/Ea

## Delta Bio™ Frog Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit introduces 1 to 2 students to basic vertebrate anatomy through the dissection of the frog.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.



Cat. No.	Description	Price
<b>Plain Injected Frogs</b>		
S81533	Frog, Foam tray, Nitrile gloves x 2 , Disposable aprons x 2, Storage bag	21.25/Ea
S81532	Frog, Foam tray, Nitrile gloves x 2 , Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	29.75/Ea
<b>Double-Injected Frogs</b>		
S81507	Frog, Foam tray, Nitrile gloves x 2 , Disposable aprons x 2, Storage bag	23.50/Ea
S81506	Frog, Foam tray, Nitrile gloves x 2 , Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	31.50/Ea

## Carolina™ Formalin Frogs

For use in introducing students to vertebrate anatomy. Carolina™ Formalin Frogs are grass frogs and are ideal for study of body systems.

- No need for scalpel – students only need dissecting scissors
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde



Cat. No.	Injection Type	Length	Quantity	Price
S37715*	Plain	3 to 4 in.	10/bag	45.00/Ea
S37712*	Plain	4 to 5 in.	10/bag	69.50/Ea
S37643*	Plain	4 to 5 in.	1/bag	6.95/Ea
S37709*	Plain	5+ in.	10/bag	260.00/Cs of 30
S37640*	Plain	5+ in.	1/bag	8.70/Ea
S37714*	Double	4 to 5 in.	10/bag	83.75/Ea

## Delta Bio™ Frogs

**Bio-Fresh™ frog specimens** are fixed in formaldehyde, repeatedly rinsed and packaged in Bio-Fresh solution. These budget-friendly specimens meet or exceed OSHA lab standards for formaldehyde, and are available with colored latex injections.

**Fisher-Free™ frog specimens** are 100% formaldehyde-free. They are stored in a nontoxic solution and are mold- and stiffening-resistant. Available with colored latex injections.



Cat. No.	Injection Type	Length	Quantity	Price
<b>Bio-Fresh Preservative</b>				
S1635S50*	Plain	3.5 to 4 in.	50/Pail	195.00/Pk
S1643S*	Double	3.5 to 4 in.	200/CS	56.25/Pk
S1619S*	Plain	4 to 4.5 in.	10 Pack	63.25/Pk
S1619S10*	Plain	4 to 4.5 in.	10/Pail	66.50/Pk
S1619S50*	Plain	4 to 4.5 in.	50/Pail	316.00/Pk
S1619S100*	Plain	4 to 4.5 in.	100/Pail	628.00/Pk
S1623S*	Single	4 to 4.5 in.	10 Pack	54.25/Pk
S1672S*	Double	4 to 4.5 in.	120/CS	62.50/Pk
S1631S*	Plain	4.5 to 5.5 in.	10 Pack	93.00/Pk
S1611S*	Double	4.5 to 5.5 in.	100/CS	88.75/Pk
<b>Fisher-Free Preservative</b>				
S0901S*	Plain	4 to 4.5 in.	120/CS	97.00/Pk
S0902S*	Single	4 to 4.5 in.	10 Pack	106.00/Pk
S0930S*	Plain	4.5 to 5.5 in.	100/CS	114.00/Pk



## Carolina™ Formalin Salamanders



Preserved larval tiger salamander are great for exploring amphibian anatomy and advancing the study of evolutionary biology.



- Ambystoma sp.
- Larval tiger salamanders
- Similar to Necturus sp., with external gills, gill slits, and a long caudal fin. Different in that tiger salamanders can undergo complete metamorphosis to transition to a terrestrial habitat and have 5 digits on their hindlimbs instead of 4.
- Some may retain their larval characteristics and still reach sexual maturity, a phenomenon called neoteny.
- Preserved in formalin
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe™ is an odorless fluid designed to minimize the unpleasant odor of formaldehyde

Cat. No.	Quantity	Price
S81621	1/Bag	8.00/Ea
S81622	10/Bag	79.75/Pk

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**INJECTION KEY**  
**Plain:** Circulatory system not injected with colors  
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**Triple:** Arteries red, veins blue and hepatic portal veins yellow

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Birds

## Delta Bio™ Pigeon Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit introduces 1 to 2 students to the avian anatomy and organ systems through the dissection of a pigeon.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.



Cat. No.	Includes	Price
S81520	Pigeon, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	39.00/Ea
S81521	Pigeon, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	31.50/Ea

## Carolina™ Formalin Pigeon

For use in exploring avian anatomy. Carolina™ Formalin Pigeon is ideal for comparative vertebrate courses.

- Family Columbidae
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde



Cat. No.	Description	Price
S37649*	Formalin Pigeon	15.25/Ea

## Delta Bio™ Pigeons

*Columba sp.*  
 Large adult pigeon specimens provide an in-depth view of several traits that all birds share:



- Skin with feathers
- Wings
- Two legs
- Four-chambered heart
- Horny beak
- Double Injection
- Fisher-Free™ Preservative

Cat. No.	Injection Type	Preservative	Price
S2403S*	Double	Fisher-Free™	18.25/Ea

Fish

## Delta Bio™ Perch Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit allows 1 to 2 students to improve their specimen observation skills and achieve a better understanding of bony fish anatomy.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.



Cat. No.	Description	Price
S81531	Perch, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	17.50/Ea
S81530	Perch, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	25.50/Ea

## Carolina™ Formalin Dogfish Sharks



For use in exploring anatomy of cartilaginous fish. Carolina™ Formalin Dogfish Sharks are ideal for comparative and vertebrate anatomy classes.

- Member of class Chondrichthyes
- Mature specimens
- Characteristics: cartilaginous skeleton, five pairs of gill slits, no swim bladder or operculum
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid



Cat. No.	Length	Injection Type	Price
S72731*	18 to 22 in.	Plain	14.25/Ea
S72730*	18 to 22 in.	Double	17.25/Ea
S37634*	22 to 27 in.	Plain	16.50/Ea
S37635*	22 to 27 in.	Single	17.75/Ea
S37630*	27+ in.	Plain	19.00/Ea
S37632*	27+ in.	Double	20.00/Ea
S72732*	27+ in.	Double; Pregnant	29.00/Ea
S37631*	27+ in.	Single	18.00/Ea

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## Delta Bio™ Shark Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit allows 1 to 2 students to explore the internal organs and organ systems of a dogfish shark.

- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.



Cat. No.	Description	Price
S81510	Shark, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	46.25/Ea
S81511	Shark, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	38.25/Ea

## Delta Bio™ Dogfish Sharks

*Squalus acanthius.*

Sharks and the cartilaginous skeletoned fishes are representatives of a group of fish whose ancestors were the first jaw-bearing vertebrates. Except for skeletal degeneration, sharks are good examples of a fairly primitive type.



*Elasmobranchii squalus,* the dogfish sharks

- These sharks are from the Class *Chondrichthyes*
- Shark color injections differ from the standard color progression (see Injection Key)
- Packed in Bio-Fresh™

Cat. No.	Injection Type	Length	Quantity	Price
S1509S*	Plain	18 to 22 in.	15/CS	11.50/Ea
S1501*	Plain	22 to 27 in.	Each	16.50/Ea
S1503S*	Plain	27+ in.	10/CS	21.25/Ea
S1030S*	Single	27+ in.	Each	23.00/Ea
S1504*	Double	27+ in.	Each	22.25/Ea
S1505*	Triple	27+ in.	10/CS	29.75/Ea

### INJECTION KEY

- Plain:** Circulatory system not injected with colors
- Single:** Arteries injected with red latex
- Double:** Arteries red, veins blue
- Triple:** Arteries red, veins blue and hepatic portal veins yellow

# Study Advanced Biology, Anatomy, and Physiology

With anatomy similar to humans, Carolina™ Formalin Cats are ideal dissection specimens. Each one is shipped in Carosafe™ holding fluid designed to minimize the unpleasant odor of formaldehyde.

*Preserved cats are now in stock and inventory levels should remain steady throughout the year.*

Description	Cat. No.	Quantity
Carolina Formalin Cats	S37653ND	Each



## Mammals

### Carolina™ Formalin Cats

For use in advanced biology, anatomy and physiology classes. Carolina™ Formalin Cats are ideal dissection specimens.



- Felis catus
- Similar to human anatomy
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde

Cat. No.	Injection Type	Length (English)	Price
S37655ND*	Plain	14 to 18 in.	81.00/Ea
S37657ND*	Double	14 to 18 in.	97.00/Ea
S37653ND*	Double	18+ in.	97.00/Ea

### Carolina™ Formalin Skinned Cats



Formalin-preserved cats are ideal dissection specimens for advanced biology and anatomy and physiology classes.

- Felis catus
- Ideal specimen for studying advanced mammalian anatomy and physiology
- Similar to human anatomy
- Skin has been removed to save time and reveal underlying muscles
- Preserved in formalin
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe™ is an odorless fluid designed to minimize the unpleasant odor of formaldehyde
- Double injection



Cat. No.	Description	Price
S81620	Formalin Skinned Cats	115.00/Ea

## Delta Bio™ Skinned Cat Anatomy Kit



Double injected skinned cat is preserved in sage, non-toxic solution and packaged in a vacuum-sealed bag.



- Cat is double injected (arterial system, red; venous system, blue)
- Provided in a vacuum-sealed bag
- Does not include dissection tools, safe equipment, or additional dissection material

Cat. No.	Length	Price
S81557	14 to 18 in.	52.25/Ea
S81555	18 in.	94.00/Ea

## Carolina™ Formalin Mink



Used in lab experiments which ensures safe and non-toxic environment. Carolina™ Formalin Mink are packaged in waterproof plastic bags.



- Ranch-raised, formalin-preserved mink
- 15 in. in length
- Waterproof student name tags are furnished free with each mink

### ORDERING INFORMATION:

This item is sold and shipped to schools and businesses only. Not available to individuals or residential addresses

Cat. No.	Injection Type	Price
S37304*	Plain	15.25/Ea
S37305*	Double (Red latex in arterial system, blue latex in systemic veins)	17.75/Ea
S37306*	Triple (Red latex in arterial system, blue latex in systemic veins, yellow latex in hepatic system)	13.50/Ea

## Delta Bio™ Mink

*Mustela vison.*

Like rabbits, mink are an excellent alternative or addition to cat dissections.



- Average 13 to 17 in. (33–43cm)
- Preskinned to reduce lab waste and save time in dissection preparation
- Slender with very small amounts of adipose tissue
- May have cut hands and feet from skinning process
- Triple injection
- Oily; processed in formaldehyde, rinsed and held in Bio-Fresh™, in vacuum-packed bags

Cat. No.	Description	Price
S9214S*	Mink	23.75/Ea

## Delta Bio™ Pig Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit introduces 1 to 2 students to basic mammalian anatomy and circulatory system through the dissection of a fetal pig.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Includes	Price
S81514	Fetal pig, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	41.25/Ea
S81515	Fetal pig, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	32.50/Ea

## Carolina™ Formalin Pigs

For use in introducing students to mammalian anatomy. Carolina™ Formalin Pigs do not have well defined Musculature.

- Fetal and/or stillborn pigs
- Mainly used in basic high school and college biology classes
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odors



Cat. No.	Injection Type	Length	Price
S37672*	Double	7 to 11 in.	260.00/Cs of 10
S37667*	Plain	11 to 14 in.	23.00/Ea
S37669*	Double	11 to 14 in.	27.00/Ea
S37664*	Plain	14+ in.	23.00/Ea
S37666*	Double	14+ in.	27.00/Ea

## Fetal Pigs

### *Sus scrofa*

- Ideally suited for high school and freshman college courses where the emphasis is on basic internal anatomy
- Perfect for the beginning biology class because of its cost, availability, size and easy dissection
- Artiodactyla order is characterized by having an even number of toes
- Bio-Fresh™ specimens are fixed in formaldehyde, rinsed and packaged in Bio-Fresh solution
- Fisher-Free™ specimens are 100% formaldehyde free — fixed and held in a nontoxic solution



**Note:** Because it is a fetal specimen, musculature is not fully toned for an in-depth dissection.

Cat. No.	Injection Type	Length	Quantity	Price
<b>Bio-Fresh</b>				
S1580S*	Plain	5 to 7 in.	50/Cs	69.25/Pk
S1588S10*	Plain	7 to 11 in.	10 Pack	266.00/Pk
S1590S*	Single	7 to 11 in.	Each	22.75/Pk
S1592S*	Double	7 to 11 in.	Each	26.75/Pk
S1594S*	Plain	11 to 13 in.	Each	21.50/Pk
S1594VS*	Plain	11-13 in.	Each	214.00/Pk
S1594S10*	Plain	11 to 13 in.	10 Pack	272.00/Pk
S1596S10*	Single	11 to 13 in.	10 Pack	235.00/Pk
S1598VS*	Double	11-13 in.	Each	289.00/Pk
S1598S*	Double	11 to 13 in.	5/Cs	26.75/Pk
S1598S10*	Double	11 to 13 in.	10 Pack	252.00/Pk
S1190S*	Plain	13+ in.	Each	22.75/Pk
S1190VS*	Plain	13+ in.	Each	208.00/Pk
S1194S*	Single	13+ in.	Each	24.00/Pk
S1599S*	Double	13+ in.	Each	27.75/Pk
S1599S10*	Double	13+ in.	10 Pack	291.00/Pk
<b>Fisher-Free</b>				
S1237S	Single	7 to 11 in.	Each	27.75/Pk
S1233S	Plain	11 to 13 in.	Each	27.25/Pk
S1235S	Double	11 to 13 in.	Each	30.75/Pk
S1231S	Single	13+ in.	Each	28.00/Pk
S1232S	Double	13+ in.	Each	29.75/Pk



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### INJECTION KEY

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**Single:** Arteries injected with red latex

**Double:** Arteries red, veins blue

**Triple:** Arteries red, veins blue and hepatic portal veins yellow

## Carolina™ Formalin Rabbits

Carolina™ Formalin Rabbits facilitates the study and dissection of mammalian anatomy

- Can be used as a preserved cat alternative with minimal differences
- Makes it easy to study musculature and internal anatomy
- Mature specimens
- Preserved in formalin
- Shipped 1 per bag
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid which minimizes student and educator exposure to formaldehyde



Cat. No.	Injection Type	Price
S72457*	Double (red arteries and blue systemic veins)	59.50/Ea

## Delta Bio™ Rabbit Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit allows 1 to 2 students to easily study basic mammalian anatomy and organ systems through the dissection of a rabbit.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Description	Price
S81518	Rabbit, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	66.75/Ea
S81519	Rabbit, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	75.25/Ea

## Delta Bio™ Rabbits, Bio-Fresh™

*Oryctolagus cuniculus.*



Excellent for herbivore vs. carnivore comparative studies. We recommend dissecting at least one rabbit along with your normal cat study.

Strongest comparisons between the rabbit and cat anatomy exist within:

- Intestinal systems
- Eye position and visual acuity
- Dentition
- Forearm musculature and functionality
- Each rabbit comes with a tag and label identifying the sex

Cat. No.	Injection Type	Description	Quantity	Price
<b>S1057S*</b>	Plain	Skinned Rabbit	Each	27.50/Ea
<b>S1853S*</b>	Plain	Fur Rabbit	6/CS	26.25/Ea
<b>S1851S*</b>	Double	Fur Rabbit	1/Pk.	65.25/Ea
<b>S1059S*</b>	Double	Skinned Rabbit	Each	54.00/Ea
<b>S1060S*</b>	Triple	Skinned Rabbit	Each	72.75/Ea.

## Carolina™ Formalin Rats

For use in lessons on mammalian anatomy. Carolina™ Formalin Rats have well-developed musculature and reproductive system.

- Mature specimen
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde



Cat. No.	Injection Type	Price
<b>S37659*</b>	Plain	11.25/Ea
<b>S37661*</b>	Double	16.00/Ea



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 \*\* California - WARNING: Reproductive Harm [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)  
 \*\*\* California - WARNING: Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

### INJECTION KEY

**Plain:** Circulatory system not injected with colors  
**Single:** Arteries injected with red latex  
**Double:** Arteries red, veins blue  
**Triple:** Arteries red, veins blue and hepatic portal veins yellow

## Delta Bio™ Rat Anatomy Kit



Comprehensive dissection kit designed for distance learning. Each kit allows 1 to 2 students to perform an in-depth study of the rat through examination of its anatomy and internal organ systems.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Description	Price
<b>S81512</b>	Rat, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	44.50/Ea
<b>S81513</b>	Rat, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	37.00/Ea

## Delta Bio™ Rats, Bio-Fresh™

*Rattus norvegicus.*

Rats are similar in price to fetal pigs, but have adult musculature. If you desire a mammal specimen that is inexpensive, fully muscled and has well-developed genitalia, the rat is the specimen of choice. Pregnant rats are also available.



Cat. No.	Injection Type	Length	Description	Quantity	Price
<b>Bio-Fresh™ Preservative</b>					
<b>S1825S*</b>	Plain	7 to 9 in.	Rat	Each	12.25/Pk
<b>S1825VS*</b>	Plain	7 to 9 in.	Rat	10 Pack	136.00/Pk
<b>S1825S10*</b>	Plain	7 to 9 in.	Rat	10/Pail	115.00/Pk
<b>S1827S*</b>	Double	7 to 9 in.	Rat	Each	18.00/Pk
<b>Fisher-Free Preservative</b>					
<b>S1179S</b>	Single	-	Rat	Each	18.75/Ea.
<b>S1182S</b>	Double	-	Pregnant Rat	Each	22.75/Ea.

Mammalian Organs

## Delta Bio™ Sheep Brain Kit



Comprehensive dissection kit designed for distance learning. Each kit introduces 1 to 2 students to the mammalian brain via a sheep's brain.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Description	Price
S81538	Sheep brain, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	41.25/Ea
S81539	Sheep brain, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	33.00/Ea

## Carolina™ Formalin Preserved Sheep Pluck, Plain

Allows students to explore physiological links between organ systems and identify general structures representative of mammals.

- Heart with aorta and lungs with trachea are shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Odorless fluid designed to minimize unpleasant odor of formaldehyde
- Plain: No color injection

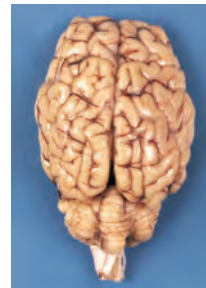


Cat. No.	Description	Price
S28064*	Sheep Pluck Preserved Specimen	18.25/Ea

## Carolina™ Formalin Preserved Sheep Brain, Dura Mater Removed

Used to study mammalian brain structure.

- Similar to human brain
- Sheep brain with dura mater removed and optic chiasma intact are shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Odorless fluid designed to minimize unpleasant odor of formaldehyde
- Plain: No color injection
- Individually damp-packed in vacuum-sealed bags



Cat. No.	Description	Price
S28069*	Sheep Brain, Dura Mater Removed, Formalin Preserved Specimen	18.75/Ea

## Carolina™ Formalin Preserved Sheep Brain, Dura Mater Removed, Hypophysis Intact

Used to study mammalian brain structure.

- Similar to human brain
- Sheep brain with dura mater removed and hypophysis (pituitary gland) intact to aid in brain study, shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Odorless fluid designed to minimize unpleasant odor of formaldehyde
- Plain: No color injection
- Individually damp-packed in vacuum-sealed bags



Cat. No.	Description	Price
S28071*	Sheep Brain Formalin Preserved Specimen	18.75/Ea

## Carolina™ Formalin Preserved Sheep Brain, Dura Mater Intact

Used to study mammalian brain structure.

- Explores general structures representative of mammals
- Connects structure to function
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe™ is an odorless fluid designed to minimize the unpleasant odor of formaldehyde



Cat. No.	Description	Price
S28065*	Sheep Brain Formalin Preserved Specimen	19.25/Ea

## Carolina™ Formalin Preserved Sheep Heart in Pericardium

Allows students to explore physiological links between organ systems and identify general structures representative of mammals.

- Heart in Pericardium with base of aorta attached is shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Odorless fluid designed to minimize unpleasant odor of formaldehyde
- Plain: No color injection



Cat. No.	Description	Price
S28073*	Sheep Heart In Pericardium Formalin Preserved Specimen	13.75/Ea

## Delta Bio™ Mammalian Heart Kit

Comprehensive dissection kit designed for distance learning. Each kit introduces 1 to 2 students to the anatomy of the mammalian heart through a sheep's heart.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Description	Price
S81534	Sheep heart, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	33.00/Ea
S81535	Sheep heart, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	25.00/Ea

## Carolina™ Formalin Preserved Sheep Heart, Plain

Allows students to explore physiological links between organ systems and identify general structures representative of mammals

- Heart with base of aorta attached is shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Odorless fluid designed to minimize unpleasant odor of formaldehyde
- Plain: No color injection



Cat. No.	Description	Price
S28067*	Sheep Heart Formalin Preserved Specimen	6.65/Ea

## Delta Bio™ Sheep Eye Kit



Comprehensive dissection kit designed for distance learning. Each kit introduces 1 to 2 students to the basic structure of the eye through a sheep's eye.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Description	Price
S81536	Sheep eyes, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	20.75/Ea
S81537	Sheep eyes, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	12.50/Ea



## Carolina™ Formalin Preserved Sheep Eyes

Explores eye structures representative of mammals.

- Sold in units of 10 and packaged together in vacuum-sealed bag
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe™ is an odorless fluid designed to minimize the unpleasant odor of formaldehyde
- Package of 10



Cat. No.	Description	Price
S28068*	Sheep Eyes Preserved Specimen	18.50/Pk

## Delta Bio™ Sheep Kidney Kit



Comprehensive dissection kit designed for distance learning. Each kit allows 1 to 2 students to study the mammalian kidney by dissecting a sheep's kidney.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Description	Price
S81548	Sheep kidney, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	28.75/Ea
S81549	Sheep kidney, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	21.25/Ea

## Carolina™ Formalin Preserved Sheep Kidney

Allows students to explore physiological links between organ systems and identify general structures representative of mammals.

- Kidneys are shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Odorless fluid designed to minimize unpleasant odor of formaldehyde
- Plain: No color injection



Cat. No.	Description	Price
S28066*	Sheep Kidney Formalin Preserved Specimen	4.95/Ea

## Carolina™ Formalin Preserved Sheep Organ Set with Manual

Allows students to identify physiological links between organ systems.



- Explores general structures representative of mammals
- Connects structure to function
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe™ is an odorless fluid designed to minimize the unpleasant odor of formaldehyde
- Simple dissection guides are provided for each organ

Cat. No.	Description	Price
S28075*	Sheep Organ Set with Manual	32.00/Ea

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 \*\* California - WARNING: Reproductive Harm [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)  
 \*\*\* California - WARNING: Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**INJECTION KEY**  
**Plain:** Circulatory system not injected with colors  
**Single:** Arteries injected with red latex  
**Double:** Arteries red, veins blue  
**Triple:** Arteries red, veins blue and hepatic portal veins yellow

## Carolina™ Formalin Pig Heart

For use in studying anatomy of cardiovascular system. Carolina™ Formalin Pig Heart is ideal for studying structure and function of heart.

- Four-chambered mammalian heart
- Like human heart, only larger
- Easily trace blood flow through heart
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid



Cat. No.	Description	Price
S37674*	Formalin Pig Heart	9.65/Ea

## Delta Bio™ Pig Heart

Premium quality organs.

Choose from our selection of pig organs for your anatomy classes.

### ORDERING INFORMATION:

All are premium quality and are packed in vacuum packs, in Bio-Fresh™.



Cat. No.	Description	Price
S9254*	Pig Heart and Pericardium	15.00/Ea
S9204S*	Pig Heart without Pericardium	9.30/Ea

## Carolina™ Carolina™ Formalin Pig Eyes

Carolina™ Formalin Pig Eyes are for use in exploring the anatomy of mammalian eye. Carolina™ Formalin Pig Eyes are similar to human eye.

- Easy dissection and examination of the mammalian eye as pig eyes are similar to human eye.
- Smaller than cow eyes and have less muscle and fatty tissue attached
- Preserved in formalin
- Shipped 10 per bag
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid which minimizes student and educator exposure to formaldehyde
- Package of 10



Cat. No.	Description	Price
S72455*	Carolina™ Formalin Pig Eyes	20.50/Pk

## Carolina™ Formalin Pig Kidney

For use in enhancing study of urinary system. Carolina™ Formalin Pig Kidney is similar to human kidney, only larger.

- Mammalian kidney
- For studying structure and function of kidney
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde



Cat. No.	Description	Price
S37675*	Formalin Pig Kidney	6.70/Ea

## Carolina™ Formalin Pig Kidney

Carolina™ Formalin Pig Kidney is for use in enhancing study of urinary system. Similar to human kidney, only larger.

- Mammalian kidney
- For studying structure and function of kidney
- Shipped in Carosafe™ Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde



Cat. No.	Injection Type	Price
S72738*	Double	10.40/Ea
S72739*	Triple	12.65/Ea

## Delta Bio™ Pig Kidney

Ideal for showing organ structure.

Show kidney structure by dissecting these superior specimens.



Cat. No.	Injection Type	Price
S9208*	Double	10.75/Ea
S9210*	Triple	12.75/Ea



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\*\*\* California - WARNING: Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

### INJECTION KEY

**Plain:** Circulatory system not injected with colors

**Single:** Arteries injected with red latex

**Double:** Arteries red, veins blue

**Triple:** Arteries red, veins blue and hepatic portal veins yellow

## Carolina™ Formalin Cow Heart

For use in studying anatomy of mammalian heart.

Carolina™ Formalin Cow Heart is ideal for studying structure and function of heart.



- Four-chambered mammalian heart
- Like human heart, only much larger
- Large size allows students to easily study anatomy
- Easily trace blood flow
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid

Cat. No.	Description	Price
S37676*	Formalin Cow Heart	41.50/Ea

## Delta Bio™ Preserved Specimens: Cow Organs

Larger specimens for easier dissection.



- Organs are of excellent quality
- Large size makes them easy for students to dissect
- Vacuum packed in Bio-Fresh™

Cat. No.	Description	Quantity	Price
S8203S*	Beef Heart	Each	38.75/Ea
S8202S*	Cow Eye	10 Pack	34.25/Pk
S1722S*	Bull Testicle	Each	16.25/Ea
S8207S*	Pregnant Cow Uterus	Each	46.50/Ea

## Carolina™ Formalin Cow Eyes

For use in exploring anatomy of mammalian eye. Carolina™ Formalin Cow Eyes are similar to human eye

- Large size allows easy dissection and examination
- Preserved in formalin
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formalin
- Package of 10



Cat. No.	Description	Price
S37717	Formalin Cow Eyes	29.00/Pk

## Carolina™ Formalin Bull Testicle

Carolina™ Formalin Bull Testicle enhances the study of the male reproductive system.



- Procured from an adult bull (2 to 2.5 years old)
- Includes the spermatic cord, epididymis, and vas deferens
- Shipped in Carosafe™ Carolina's proprietary shipping and holding fluid
- Carosafe minimizes student and educator exposure to formaldehyde

Cat. No.	Description	Price
S72735	Formalin Bull Testicle	11.00/Ea

## Stay Connected with the Fisher Science Education Team

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## Delta Bio™ Comparative Mammalian Hearts Kit



Comprehensive dissection kit designed for distance learning. Each kit allows 1 to 2 students to study a variety of different mammalian hearts and observe the subtle variations.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Includes	Price
<b>S81545</b>	Pig heart, Sheep heart, Cow heart, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	68.00/Ea
<b>S81544</b>	Pig heart, Sheep heart, Cow heart, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	76.25/Ea

## Delta Bio™ Comparative Mammalian Organ Set Kit



Comprehensive dissection kit designed for distance learning. Each kit allows 1 to 2 students to study a variety of mammalian organs, including the heart, brain, eye, and kidneys.



- Kit is designed for 1 to 2 students to conduct extensive dissections in the classroom or in their own home.
- Included dissection guide provides in-depth information on the specimen's anatomy
- Optional Dissection Tool Kit is included where indicated, featuring scissors, T-pins, Steel forceps, a Teasing needle and a Plastic ruler.
- Each specimen is preserved in formalin fixative, but washed and shipped in a unique process that is safe and ensures a hassle-free setup, dissection, and disposal.
- Information packets are included in each kit, along with detailed instructions on how to dispose of the specimen.

Cat. No.	Includes	Price
<b>S81547</b>	Sheep brain, Sheep heart, Sheep eye, Sheep kidney, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag	36.75/Ea
<b>S81546</b>	Sheep brain, Sheep heart, Sheep eye, Sheep kidney, Foam tray, Nitrile gloves x 2, Disposable aprons x 2, Storage bag, Scissors, T-pins x 6, Forceps, Teasing needle, Ruler	44.50/Ea

### Reptiles

## Carolina™ Formalin Non-Venomous Snake

For use in learning more about reptiles by investigating anatomy of nonvenomous snake. Carolina™ Formalin Non-Venomous Snake is ideal for comparative vertebrate courses.

- Species vary based on availability
- Shipped in Carosafe™, Carolina's proprietary shipping and holding fluid
- Carosafe is odorless fluid designed to minimize unpleasant odor of formaldehyde



Cat. No.	Description	Price
<b>S37648*</b>	Formalin Non-Venomous Snake	25.75/Ea

### INJECTION KEY

**Plain:** Circulatory system not injected with colors

**Single:** Arteries injected with red latex

**Double:** Arteries red, veins blue

**Triple:** Arteries red, veins blue and hepatic portal veins yellow

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 \*\* California - WARNING: Reproductive Harm [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)  
 \*\*\* California - WARNING: Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## Dissection Supplies

## Teaching Aids

## Eisco™ Jumbo Frog Dissection Model



This jumbo frog dissection model is a great alternative or supplement to traditional dissection, it is also useful for virtual learning.

- Demonstrates the general structure of a frog from the genus *Rana*
- Enlarged for better visualization of internal organs
- Dorsal side shows the external structure of the head, body, and forelegs
- Cutaway of the ventral view shows internal organs
- Liver and intestine are removed to allow for detailed study of circulatory, female reproductive, and urinary systems
- Vividly hand painted with eco friendly paint
- Made of durable polyvinyl chloride (PVC) plastic which is corrosion resistant, lightweight, and has high strength
- Resists reactions with acids, gasoline, alcohol, and hydrocarbons
- An alternative or supplement to traditional dissection in the classroom
- Identification key card included



Cat. No.	Description	Price
S27900	Jumbo Frog Dissection Model	153.00/Ea

## Eisco™ Pigeon Dissection Model



This pigeon dissection model is a great alternative or supplement to traditional bird dissection, it is also useful for virtual learning.

- Model demonstrates the general structure of a pigeon
- Enlarged for better visualization of internal organs
- Vividly hand painted with eco friendly paint
- Made of durable polyvinyl chloride (PVC) plastic which is corrosion resistant, lightweight, and has high strength
- Resists reactions with acids, gasoline, alcohol, and hydrocarbons
- An alternative or supplement to traditional dissection in the classroom
- Identification key card included
- 18 x 16 in.



Cat. No.	Description	Price
S27901	Pigeon Dissection Model	112.00/Ea

## Eisco™ Pig Dissection Model



This pig dissection model is a great alternative or supplement to traditional dissection, it is also useful for virtual learning.

- Model demonstrates the general structure and internal organs of a pig
- Features include detachable liver, intestines, two piece heart, lungs, and stomach
- Made of durable polyvinyl chloride (PVC) plastic which is corrosion resistant, lightweight, and has high strength
- 56 x 30 x 7 cm
- Resists reactions with acids, gasoline, alcohol, and hydrocarbons
- Vividly hand painted with eco friendly paint
- An alternative or supplement to traditional dissection in the classroom
- Identification key card included



Cat. No.	Description	Price
S27906	Pig Dissection Model	284.00/Ea

## Eisco™ Earthworm Dissection Model

Shows internal and external structures.

- Extra large model to study Annelids
- One part shows external structure
- Another end dissected to show internal organs
- Highlights structures of digestive, circulatory and reproductive systems
- Mounted on base
- Supplied with English key card
- L x W x H: 22 x 11.8 x 2.8 in.; 5.5 lb.



Cat. No.	Description	Price
S96548	Earthworm Dissection Model	81.00/Ea



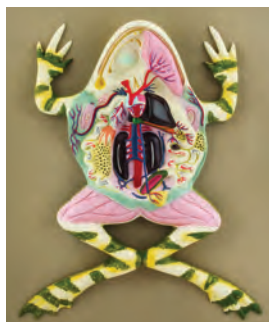
**YOUR STEM PROGRAM**  
MAKE IT AMAZING!

[fisheredu.com/STEM](http://fisheredu.com/STEM): Your source for products, professional development, resources and everything STEM.

## Eisco™ Frog Dissection Model



Demonstrates internal structures of a frog and can be used to enhance or replace physical dissection laboratory activities



- Model representative of a dissected frog
- Numbered internal and external structures
- Mounted on base
- Supplied with English key card
- Ideal for biology classrooms

Cat. No.	Description	Price
S80861	Frog Dissection Model	76.00/Ea

## Delta Bio™ Mammalian Organ Dissection Guides

Ideal tools for individual student use.

These guides enable students to do dissections independently. They provide clear directions for work on the heart, brain, kidney or eye.



Cat. No.	Description	Price
S4171S	Mammalian Heart Dissection Guide	7.50/Ea

## Frog Dissection 3-D Model Kit



Assemble and use 3-D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home



Cat. No.	Description	Price
S81454	Frog Dissection 3-D Model	37.50/Ea

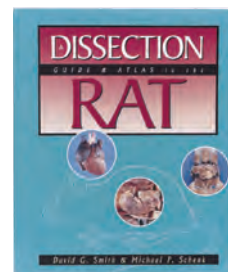
## Carolina™ Dissection Guides

Student-friendly soft-cover dissection manuals with step-by-step dissection instructions. Include anatomical structures. Fully illustrated to lead students through animal physiology studies.



### Photo Manual and Dissection Guides

- Spiral Bound
- Full-page black-and-white photographs
- Self quiz after every unit
- Choose from Rabbit, Frog, Shark, Cat and Pig



### Rat Dissection Guide and Atlas

- Unbound with perforations for 3-ring binder
- Full color photographs

Cat. No.	Description	Price
S72747	Photo Manual and Dissection Guide of the Frog	21.25/Ea
S72750	Dissection Guide and Atlas to the Rat Book	45.50/Ea

## Carolina™ Dissection Mats

Carolina™ Dissection Mats allow students to self-guide their own dissection.



- Double-sided, water-proof vinyl mat
- Reusable; easily wipes clean
- Includes:
  - Simple dissection instructions
  - Detailed, color photographs
  - Labeled external and internal anatomy
  - Defined structures with functions

Cat. No.	Subject	Min. Grade Level	Price
S72745	Dogfish Shark	7	7.95/Ea
S72741	Mammalian Heart	5	7.95/Ea
S72743	Mammalian Kidney	5	7.95/Ea
S72752	Starfish	3	7.95/Ea
S72740	Sheep Brain	3	7.95/Ea

## Dissection Tools

## Precision Dissection Kits with Goggles

The ideal instrument packages for dissection classes



- Semi-hard, slotted plastic case
- Autoclavable
- Fine quality tools
- Easy to carry
- Individual sections for each tool
- Avoids breakage of fragile tools
- Safer to use for students and teachers
- Excellent for in-lab use and field work

### S72132 Includes:

- Dissecting Mall Probe Chrome Plated (P/No. : 36)
- Ruler, 6in (P/No: 30)
- Student dissecting forceps, 4.5in. (P/No: 15 or 17C)
- Dissecting Iris scissors, 4.5in (P/No: 9)
- Dissecting scalpel with screw-lock blade (P/No: 21)
- Glass Dropper (P/No: 39)
- Dissecting Needle Straight plastic handle (P/No: 31)
- Dissecting T-Pins six-pcs (P/No: 42)
- See-thru plastic case with locks – Autoclavable (P/No: 505P)
- Eyewear
- Anti-Scratch UV absorbing polycarbonate lens provide outstanding impact strength and optical clarity for rugged protection
- Provides 99.9- UV protection
- Great wrap-around style with adjustable temples, providing a secure, comfortable fit
- Universal Nose Bridge prevents slipping and sliding
- Small sizes designed to fit a child or small faces are also available
- Meets ANSI Z87.1-2003 and ANSI + High Impact Standards
- CUL Certified to meet CAN/CSA Z94.3

### S72130 and S72131 Includes the above and latex-free blue nitrile exam gloves

- CFIA and FDA approved for food handling

Cat. No.	Description	Price
S72132	Dissection Kit with Goggles	14.75/Ea
S72131	Dissection Kit with Goggles and Large Gloves	23.50/Ea

## Zippy™ Dissection Kit

Zippy™ Dissection Kit for students comes in a vinyl zipper case. Fine grade dissecting instruments stay secure in the case during transportation.



### Contains:

- Ruler 6 inches, plastic (P/No: 30)
- Dissecting student scalpel 1.5 blade, stainless steel (P/No: 22)
- Glass Dropper with rubber bulb (P/No: 39)
- Dissecting student dissecting scissors 4.5 inches (P/No: 8 or P/No: 9)
- Dissecting student forceps, straight, 4.5 inches (P/No: 15)
- Dissecting teasing needle with plastic handle straight (P/No: 31)
- Dissecting teasing needle with plastic handle angular (P/No: 32)
- Black or Maroon Vinyl zipper case (P/No: 50ZP)
- Eyewear: Anti-Scratch UV absorbing polycarbonate lens provide outstanding impact strength and optical clarity for rugged protection
- Provides 99.9- UV protection.
- Great wrap-around style with adjustable temples, providing a secure, comfortable fit.
- Universal Nose Bridge prevents slipping and sliding.
- Small sizes designed to fit a child or small faces are also available.
- Meets ANSI Z87.1-2003 and ANSI + High Impact Standards.
- CUL Certified to meet CAN/CSA Z94.3.
- Nitrile Gloves Powder-Free.
- Blue Textured
- Containing no natural rubber proteins
- 100 - latex-free
- CFIA and FDA approved for food handling
- Excellent comfort and fit for prolonged use
- Provides excellent sensitivity and dexterity

Cat. No.	Includes	Price
S72121	Small Gloves	21.75/Ea
S72122	Medium Gloves	22.75/Ea
S72123	Large Gloves	21.75/Ea

## Classroom Dissection Set

An ideal, cost-saving classroom dissection set for 20 or 40 students.

- Includes 20 each of the seven dissection tools for a 20-student class
- Can also be used for 40 students working in pairs



### ORDERING INFORMATION:

Dimensions: 15 x 13 x 2.25 in. (38 x 33 x 5.7cm)

### INCLUDES:

- 20 student scissors, 4.5 in.
- 20 student forceps, 4.5 in.
- 20 scalpel handles
- 100 scalpel blades
- 20 plastic, straight teasing needles
- 20 plastic, angular teasing needles
- 20 glass droppers
- 20 plastic rulers, 6 in.
- 20 packs of six T-Pins (or a bulk box of 300)
- One six-compartment tray for instruments

Cat. No.	Description	Price
S07040	Classroom Dissection Set with Tray	132.00/Ea

## Student Dissecting Kits

Complete dissection kits for use in the student lab.

### Kit with See-Through Plastic Case:

- Dissecting scissors, 4.5 in.
- Dissecting forceps, 4.5 in. chrome-plated
- Dissecting scalpel, chrome-plated
- Two dissecting teasing needles (one angular, one straight) with plastic handles
- Plastic ruler, 6 in.



### Kit with Black Vinyl Case:

- Dissecting scissors, 4.5 in.
- Dissecting forceps, 4.5 in. chrome-plated
- Dissecting scalpel, chrome-plated
- Two dissecting teasing needles (one angular, one straight) with plastic handles
- Glass dropper with rubber bulb
- Plastic ruler, 6 in.

Cat. No.	Description	Price
S06843	Plastic Case	12.00/Ea
S06831	Vinyl Case	11.75/Ea

## Eisco™ Dissection Sets

Stainless steel instruments in case



### Economy Set:

- (1) Scissors
- (1) Forceps
- (1) Straight needle with wooden handle
- (1) Bent needle with wooden handle
- (1) Glass pipet with rubber dropper
- (1) Scalpel handle with sterile blade
- (1) 6" plastic ruler

### Premium Set:

- (2) Scissors
- (2) Forceps
- (1) Probe & seeker
- (1) Scalpel handle with sterile blade
- (1) Straight needle with wooden handle

### Advanced Set:

- (1) 4.5" Straight forceps
- (1) 4.5" Curved forceps
- (1) 5" Artery forceps
- (1) Flat forceps
- (1) 5" Bone cutter
- (1) 4.5" Scissors
- (1) 5.5" Scissors
- (1) 5.5" Straight needle
- (1) 5.5" Curved needle
- (1) 5.5" Probe & seeker
- (1) 6" Dental probe
- (1) #4 Scalpel handle with #23 sterile blade

Cat. No.	Description	Price
S14004	Economy 7 Piece Dissecting Set	9.70/Ea
S14005	Premium 7 Piece Dissecting Set	22.75/Ea
S23633	Advanced 12 Piece Dissecting Kit	35.50/Ea

## General Biology Dissecting Kit

For basic general biology dissection.

### INCLUDES:

- 5SB- Surgical Scissors one side sharp and one side blunt
- 5BBCD- Surgical Scissors one side sharp and one side blunt but with curved blades
- Two forceps 5.5 in. (one bent and one straight)
- Two teasing needles (one straight and one bent)
- Scalpel handle no. 3 and no. 4
- Mall probe 6



- One piece blade for scalpel handle no. 3 and no. 4
- Ruler 6 in.
- Double fold vinyl case

Cat. No.	Description	Price
S06841	General Biology Dissecting Kit	12.50/Ea



## Eisco™ Stainless Steel Forceps with Toothed Tips



Provide a tight, slip-resistant grip during delicate work

- Made from high quality stainless steel
- Toothed tips provide a firm, slip-resistant grip
- Perfect for any science or home laboratory
- Designed for delicate work
- Reusable and washable
- 4.75 in. long



Cat. No.	Description	Price
S27475	Stainless Steel Forceps with Toothed Tips	3.55/Ea

## Microdissection Forceps

Microdissection Forceps Set of 5 is ideal for super-fine dissection applications and working under a microscope

- Contains widely used 5 pairs of forceps
- Highly precise and extra fine tips to perform micro-dissection
- Includes 2 curved and 3 straight micro-dissection forceps
- Stainless Steel
- Transparent case



Cat. No.	Description	Price
S72112	Microdissection Forceps, Set of 5	22.00/Ea

## Stainless Steel Microdissection Forceps 4.5-inch

Microdissection Forceps 4.5-inch, Stainless Steel are ideal for working under a microscope

- Dissecting forceps is great for micro-dissection work
- Features straight or curved narrow precision points to help access hard-to-reach areas during dissection
- Narrow precision points are excellent for precisely manipulating minuscule specimens under the microscope
- Premium quality stainless steel offers durability and reliability
- Working under the microscope
- Watch makers application
- Splinter removal



Cat. No.	Tip Style	Price
S72116	Tapered Fine Points	3.20/Ea
S72117	Fine Curved Points	3.30/Ea
S72115	Long Narrow Points	3.30/Ea

## Featherweight Entomology Forceps

Ideal for handling larvae or eggs without crushing them or specimens stored in vials

- Bendable
- Set of 2 contains one fine tip and one wide top forceps



### Set of 5 (S72111)

Set of 5 are ideal for handling larvae or eggs without crushing them or specimens stored in vials

- 2 featherweight forceps - Spring steel bends into virtually any shape
- 1 narrow tip, 4.5in.
- 1 one broad tip, 4.25in.
- Insect pinning forceps - Surgical stainless steel, 4.5in.
- 2 Micro-dissection forceps
- 1 long shank with very fine points, 4.5in.
- 1 curved with very fine points, 4.5in.

Cat. No.	Description	Price
S72113	Narrow Point	7.45/Ea
S72114	Broad Point	7.45/Ea
S72110	Featherweight Entomology Forceps, Set of 2	15.00/Ea
S72111	Entomolgy Forceps Set of 5	22.25/Ea

## Dissecting Forceps with Fine Points

For purposes involving delicate dissection.

- Made of stainless-steel
- Can be used under the microscope
- Guide pin for matching of points
- Ridges for easy grip
- Length: 11.43cm (4.5 in.)



Cat. No.	Description	Price
S08096	Fine Points Forceps	2.35/Ea

## Economy Dissecting Forceps

For starters used in various surgical purposes.

- Made of chrome plated steel
- Serrated tips and knurled handles for better grip in wet and dry use
- Length: 11.43cm (4.5 in.)



Cat. No.	Description	Price
S08099	Economy Forceps	2.00/Ea

## Probe Seeker Angular Probe

Used when working with vessels, nerves, and muscles.

- Made from chrome plated steel
- Features a sharp point at one end and angular medium point on opposite side
- Length: 15.24cm (6 in.)



Cat. No.	Description	Price
S08110	Probe Seeker Angular Probe	2.30/Ea

## Eisco™ Hand Microtome

Eisco™ Hand Microtome is a sturdy, user-friendly tool for providing slices of a variety of materials.

- Hand micrometer
- Replicate precise cuts as thin as 0.01 microns
- Top Plate 75 mm diameter
- External milled knob
- Clamping mechanism secures specimen of various sizes in place while cutting
- Height: 5.6 cm



**WARRANTY:**  
1 year limited manufacturer warranty

Cat. No.	Description	Price
S89496	Hand Microtome	67.50/Ea

## Eisco™ Stainless Steel Dissecting Tray

Features four raised ridges to keep specimen in place



- Dissection tray made out of high quality stainless steel
- Four raised ridges inside tray help prevent specimens from sliding
- Tray depth measures 1.75 in.
- Great for classrooms
- 12 x 8 in.

Cat. No.	Description	Price
S27474	Stainless Steel Dissection Tray	20.00/Ea

 \* California - WARNING: Cancer [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)  
 \*\* California - WARNING: Reproductive Harm [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)  
 \*\*\* California - WARNING: Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## Eisco™ Wooden Dissecting Boards

Wooden dissecting boards made from softwood allow pins to be easily placed to hold specimens. The boards feature raised borders on all four sides to contain specimens and supplies.

- High quality dissecting boards with raised border
- Made of softwood to allow pins (not included) to be easily placed to hold specimens
- Perfect for displaying insects or other specimens during dissection or for display



**WARRANTY:** 1 year limited manufacturer warranty

Cat. No.	Size	Price
S39752	Small 262 x 210 x 27mm	36.25/Ea
S39753	Medium 311 x 211 x 27mm	33.25/Ea
S39754	Large 562 x 392 x 27mm	56.00/Ea

## United Scientific™ Large Dissecting Tray with Wax

High quality, affordable dissecting tray with wax

- 13 x 9.5 x 2 in.



Cat. No.	Description	Price
S80769*	Large Dissecting Tray with Wax	24.00/Ea

## Eisco™ Dissecting Tray

Used for dissection activities.

- Made of stainless-steel
- Tray with wax
- Size: 30 x 20cm



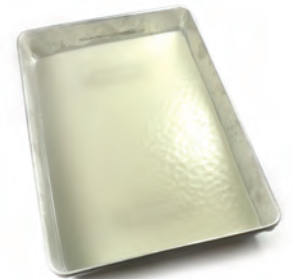
Cat. No.	Description	Price
S23636	Steel Dissecting Tray	24.75/Ea

## Eisco™ Dissecting Tray

Aluminum dissection tray with wax liner.

1 in. thick wax can be melted for easy renewal of pinning surface. 14 x 9 x 2 in. inches approximately. Works great with™ premium dissection pins

- 1 in. thick wax liner can be easily melted for resurfacing
- High quality aluminum construction
- 35 x 24 x 5cm



Cat. No.	Description	Price
S14000	Aluminum Dissection Tray	31.25/Ea

## fisherbrand Aluminum Dissecting Pan

Major tool in dissection is available without dissecting wax.

- Made purely of aluminum
- Rolled edges for rigidity
- Stack for compact storage
- Rustproof
- 11 x 7 x 1.5 in.



**ORDERING INFORMATION:**  
Dimension: 11 x 7 x 1.5 in.

Cat. No.	Description	Price
S90850	Aluminum Dissecting Pan	15.00/Ea

## Eisco™ T-Pins for Dissecting

Sold in boxes of 100.

- Nickel plated
- 1.5 in.



Cat. No.	Description	Price
S99385	Dissecting T-pins	5.65/Ea

## Eisco™ Stainless Steel Probe and Seeker

Eisco™ Stainless Steel Probe and Seeker is made from high quality stainless steel and features an angled blunt needle.



- Probe and seeker with blunt end needle
- Made from quality stainless steel
- Single piece probe is 5 in. long (127 mm)
- Great for experiments, dissections, and demonstrations
- Height: 1.3 cm

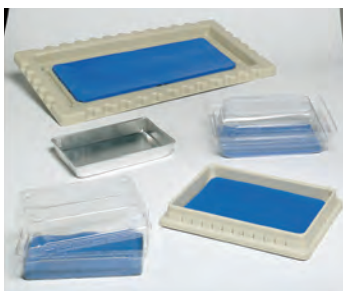
**WARRANTY:**  
1 year limited manufacturer warranty

Cat. No.	Description	Price
S29350	Stainless Steel Probe and Seeker	2.00/Ea

## Dissection Pans and Pads

Keep specimens looking fresh between dissection periods.

- High-density polyethylene (HDPE) pans offer tight-sealing lids for durability and easy cleanup
- Each is available with Flex-Pads — odorless vinyl pads that are machine washable and reusable
- Flex-Pads replace wax for faster setup and cleanup



Cat. No.	Dimensions (L x W)	Material	Description	Price
S17413	11.5 x 7.5 in.	Aluminum	Standard Dissection Pan	14.00/Ea
S17421	11.5 x 7.5 in.	Vinyl	Replacement Standard Flex-Pad	5.00/Ea
S17427	12.5 x 9 in.	Vinyl	Deluxe Pan with Flex-Pad and Cover	18.00/Ea
S17424	12.5 x 9 in.	Vinyl	Replacement Deluxe Flex-Pad	6.95/Ea

## United Scientific™ Insect Pins

Insect Pins for holding insect specimens in place.

- Steel pins are coated with a corrosion-resistant finish and have a yellow epoxy head
- Pack of 100



Cat. No.	Description	Price
S81080	Insect Pins	5.60/Ea

## Archaeology Probe Kit

Archaeology Probe Kit offers metal rods or tubes that are pushed into unexcavated deposits to locate as yet unexposed hard features such as walls, floors, bedrock, bone, etc.



Cat. No.	Description	Price
S72151	Archaeology Probe Kit	15.00/Ea

## Eisco™ Stainless Steel Bone Cutter

Features heavy duty construction, a return spring, and locking arm

- Stainless steel superior bone cutter
- Heavy duty construction
- Features return spring and locking arm
- For educational use only
- Not for medical use, this item should never be used on humans or other living specimen of any kind
- 120mm



Cat. No.	Description	Price
S80805	Stainless Steel Bone Cutter	14.50/Ea

## Eisco™ Stainless Steel Scalpel



Durable construction for continued use during dissection labs



- One-piece scalpel
- Made of stainless steel
- For educational use only
- Not for medical use, this item should never be used on humans or other living specimen of any kind
- 160mm

Cat. No.	Description	Price
S80806	Stainless Steel Scalpel	2.60/Ea

## Eisco™ Sterile Disposable Scalpel



Single use, disposable plastic scalpel comes pre-sterilized in an individual packet



- Disposable scalpel
- Durable, permanent fitted blades
- Packaged in an individual bag
- Pre-sterilized
- For educational use only
- Not for medical use, this item should never be used on humans or other living specimen of any kind

Cat. No.	Description	Price
S80807	Sterile Disposable Plastic Scalpel	1.50/Ea

## Disposable Scalpel

Machine-sharpened, razor-sharp, stainless-steel blade edge that lasts.

- Tapered handle can double as a section lifter, probe, or depressor
- Special safety tab covers the blade to prevent accidents, then snaps off for use
- Shipped in a sealed foil pouch to preserve sterility



Cat. No.	Description	Price
S17800	Disposable Scalpel	4.55/Ea

## Scalpel Handle

Scalpel Handle #3 comes with a 10-pack of No. 10 blades

- Scalpel handle features black oxide coating for extra corrosion and rust resistance
- Includes number 10 blades, 10 pcs
- Length: 5in.
- Ideal for dissection
- Ideal for wood carving



Cat. No.	Description	Price
S72156	Scalpel Handle #3 with No. 10 Blades	10.50/Ea

## Eisco™ Scalpel Handles

Solid handles provide a good, firm grip during dissection.



- High-quality steel handles
- Slotted to accept blades

Cat. No.	Size	Length Overall	Price
S95938	#4	9.05 in.	9.85/Ea
S95937	#3	7.08 in.	9.85/Ea

## Eisco™ Stainless Steel Dissecting Scissors, Fine Point



Made from high quality, durable stainless steel and ideal for use with delicate work

- Dissecting scissors
- Made from high quality, durable stainless steel
- Features fine points for delicate work
- Closed Shanks
- For educational use only
- Not for medical use, this item should never be used on humans or other living specimen of any kind
- 5 in.



Cat. No.	Description	Price
S80799	Stainless Steel Dissecting Scissors, Fine Point	7.40/Ea

## Eisco™ Stainless Steel Dissecting Scissors, Blunt End



Made from stainless steel with a blunt end and closed shanks

- Dissecting scissors
- Blunt end
- Closed shanks
- Made of stainless steel
- For educational use only
- Not for medical use, this item should never be used on humans or other living specimen of any kind
- 125mm



Cat. No.	Description	Price
S80803	Stainless Steel Dissecting Scissors, Blunt End	4.45/Ea

## Dissection Operating Scissors, Sharp/Sharp

Dissection Operating Scissors, Sharp/Sharp feature black oxide coating



Cat. No.	Description	Price
S72155	Dissection Operating Scissors, Sharp/Sharp	8.40/Ea

## United Scientific™ Black Dissecting Wax

Dissecting Wax for use with a variety of Dissecting Pans.

- Black wax for dissecting pans
- Prop 65 Warning Label



Cat. No.	Description	Price
S81061*	Dissecting Pan Black Wax	8.70/Ea

## Student Grade Dissecting Scissors

For general purpose dissection.

- Features two sharp points
- Made of mirror polish finish stainless-steel and brushed finish
- Length: 11.4cm (4.5 in.)



Cat. No.	Description	Price
S08089	Student Grade Dissecting Scissors	3.40/Ea

## Bio-Fresh™ Concentrate

Keep your specimens moist and preserved.

- Use as a humectant during your dissections to keep your specimens moist, flexible and mold-free
- Use a spray bottle or atomizer to mist your specimens during use and just before sealing them at the end of class
- Dilute per directions on the bottle
- Contains no formaldehyde and is lightly scented



Cat. No.	Capacity	Description	Quantity	Price
S6011S	128.4 oz.	Bio-fresh	Each	50.00/Ea
S6010S	32 oz.	Bio-fresh	12/CS	14.80/Ea
S601010	32 oz.	Biofresh Spray Bottle	12 Case	17.75/Ea

## Plastic Zip Bags for Science Kits

Consumable for use with multiple projects and in science kits.

- 7 x 8 in., 2mil
- Pack of 100



Cat. No.	Description	Price
S05254	Plastic Zip Bags	10.75/Ea

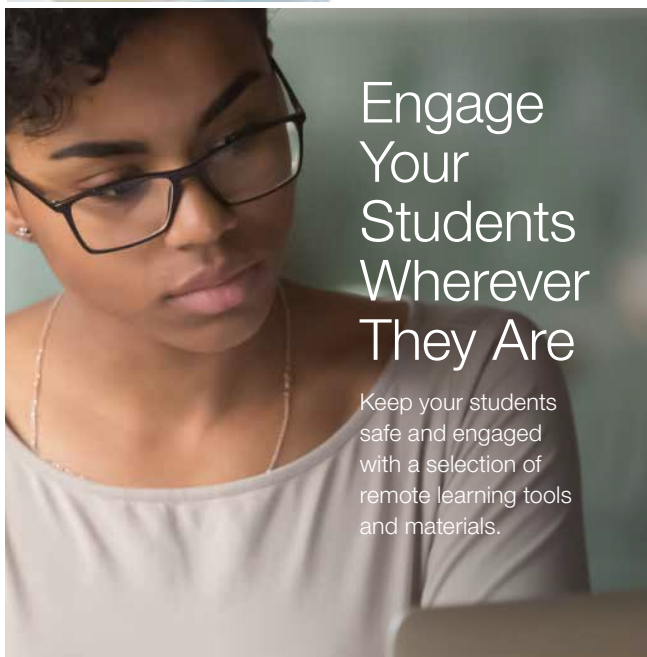
## FISHER SCIENCE EDUCATION NURSING AND CTE EDUCATION PROGRAMS

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# Prepared Individual Microscope Slides

We offer a full array of specimens — from general study to zoology — prepared by skilled technicians using state-of-the-art equipment.

- Made of high-quality materials for clear images
- Prepared in several steps to ensure quality
- Quality control performed after each step

## Featured Eisco Microscope Slides

Description	Cat. No.
<b>Miscellaneous</b>	
Colored Threads, Crossed, Whole Mount	S29626
Letter E, Whole Mount	S29618
<b>Bacterial</b>	
Bacteria, Typical, Whole Mount	S29656
Gram Positive, <i>Bacillus</i> sp.	S29621
Gram Positive, <i>Coccus</i> sp.	S29627
Gram Negative, <i>Escherichia coli</i>	S29620
Gram Negative, <i>Bacillus</i> sp., Carbolfuchsin Stain	S29623
<b>Protists</b>	
<i>Amoeba proteus</i> , Whole Mount	S29648
<i>Euglena viridis</i> , Whole Mount (Protist)	S30182
Paramecium, Whole Mount	S29642
Planaria, Carbon-Fed, Whole Mount	S30294
<b>Botanical</b>	
Mitosis, Plant (Onion), Lateral Section	S29617
Root, <i>Allium</i> sp., Cross Section	S29639
Epidermis, Onion Bulb, Whole Mount	S29657
Dicot and Monocot Leaves, Composite	S30195
Ligustrum Leaf, Cross Section	S30270

Visit [fisheredu.com/slides](https://fisheredu.com/slides) or contact your Fisher Science Education sales representative for a full listing of available slides.

## Featured Eisco Microscope Slides

Description	Cat. No.
<b>Zoological</b>	
Adipose Tissue Section, H&E Stain, Rabbit	S29635
Adrenal Gland Section, Rabbit	S29665
Areolar Tissue Section, Feline	S29643
Bone Section, Spongy, Porcine	S29619
Bone Section, Ground, Compact, Porcine or Human	S29632
Epithelium, Pseudostratified Columnar Ciliated, H&E Stain, Rabbit	S29625
Epithelium, Simple Cuboidal	S30288
Epithelium, Simple Cuboidal, Rabbit	S29630
Epithelium, Simple Columnar, Canine	S29634
Epithelium, Squamous, Mammal	S30208
Fibrocartilage, White, Rabbit	S29641
Hyaline Cartilage Section, Rat	S29660
Lung Section, Rabbit	S29622
Meiosis, Grasshopper	S30204
Mitosis, Animal and Plant (Ascaris and Onion)	S29649
Motor Nerve Ending Plates, Whole Mount, Rabbit	S29644
Muscle, Cardiac, Longitudinal Section, Mammalian	S30292
Muscle, Smooth, Cross and Longitudinal Sections, Canine	S29636
Pancreas Section, Rat	S29654
Spinal Cord, Cross Section, Rabbit	S29645
<b>Human</b>	
Blood Smear, Wright's Stain	S29616
Gallbladder Section	S30305
Artery and Vein, Medium, Cross Section	S29633
Skeletal Muscle, Longitudinal Section	S29631
Lung Section	S29640
Sperm Smear, Whole Mount	S29659
Testis Section	S29653

Visit [fisheredu.com/slides](https://fisheredu.com/slides) or contact your Fisher Science Education sales representative for a full listing of available slides.

Prepared Slides

## Visual Microscopy Learning Kits

Photomicrographs of classical microorganisms, each in a durable, versatile frame.



The large 16 x 20 inch size and high resolution images makes it easy for a student to see cellular or tissue features that are often difficult for the student to understand on a small print or microscope slide. A teacher's guide is provided with each kit, complete with lesson plan options and classroom discussion questions. Frames are durable PVC, versatile because they are ready-to-hang on any hook or used in student hands, and can be written on with a dry erase marker.

Cat. No.	Description	Price
S39067	Muscle Tissue Visual Microscopy Learning Kit	280.00/Ea
S39074	Smooth Muscle Tissue Visual Microscopy Learning Kit	46.75/Ea
S39080	Multipolar Neuron Visual Microscopy Learning Kit	46.75/Ea
S39082	Teased Peripheral Nerve Visual Microscopy Learning Kit	37.50/Ea
S39085	Blood Cell Visual Microscopy Learning Kit: A set of five high resolution photomicrographs demonstrating white blood cells	209.00/Ea

## United Scientific™ Basic Prepared Slides

Set of 25



- Mitosis in Plants, cs
- Pollen Grains, wm
- Amoeba, wm
- Yeast Cells, wm
- Green Algae, wm
- Letter "e"
- Tape Worm, ts
- Silk Fabric, wm
- Lily Leaf, vs
- Mammal Lung, ts
- Meiosis in Animals
- Aves Feather, wm
- Lily Stamen, ts
- Mammal Hair, wm
- Mosquito Mouth Parts, wm
- Housefly Mouth Parts, wm
- Frog Blood Smear
- Human Blood Smear
- Onion Cells, wm
- Hibiscus Stem, ts
- Wool Fabric, wm
- Fish Scale, wm
- Skeletal Muscle, wm
- Herbaceous Stem, young, ts
- Skin Cells, vs

Cat. No.	Description	Price
S96420	Basic Prepared Slide Set	63.00/Ea

## United Scientific™ Prepared Microscope Slide Set

Prepared microscope slides featuring 24 different subject areas.

Recommended for elementary through high schools.

- Comprehensive selection of prepared microscope slides featuring 24 different subject areas
- The set includes slides depicting Protozoa, Porifera, Coelenterata, Platyhelminthes, Annelida, Anthropoda, Molluska, Echinodermata, Pisces, Reptila, Aves, Mammalia, Development, Bacteria, Fungi, Algae, Pteridophyta, Cells, Leaves, Stem, Root, Reproductive organs, Cell contents, and Vascular systems
- Dimensions: 9 x 8 x 2 in.
- Shipping weight 2.50 lb.



Cat. No.	Description	Price
S90328	Prepared Microscope Slide Set	359.00/Ea



## United Scientific™ Prepared General Biology Slides

Set of 25 general biology slides comes with a case for easy storage and retrieval.

**INCLUDES:**

- Amoeba proteus, wm
- Hydra, wm
- Earthworm, cs of posterior
- Daphnia and cyclops, wm
- Housefly head with mouthparts, wm
- Housefly leg with clinging pads
- Mouth smear, squamous epithelium
- Striated muscle, ls
- Human blood smear
- Bacteria, smear from mouth
- Diatoms, mixed, wm
- Spirogyra, vegetative filaments, wm
- Aspergillus, wm
- Moss stem with leaves, wm
- Buttercup root, cs



- Corn stem, cs
- Lily anthers, cs
- Lily ovary, cs
- Onion epidermis, wm
- Onion root tip, ls, mitosis
- Human scalp, vertical sections
- Compact bone, cs
- Sunflower stem, cs
- Lilac leaf, cs
- Honeybee anterior and posterior wing

Cat. No.	Description	Price
S96419	General Biology Prepared Slide Set; 25/Pk.	84.00/Ea

## Prepared Slides

These prepared slide sets provide the best microscopic views.

- Set contains 12 slides with four specimens (packaged in two boxes)
- Grades K to 3

**Box One Includes:**

- **Animals:** Goldfish Scale, Hare Hair, Camel Hair and Feather Fowl Point
- **Plants:** Woody Stem of Pine, Camellia Leaf Section, Bamboo Shoot and Stem of Sponge Gourd
- **Insects:** Leg of Butterfly, Wing of Butterfly, Wing of Locust and Leg of Honeybee
- **Textile Fibers:** Hemp Fiber, Silk Stuff, Cotton Fiber and Bemberg



**Box Two Includes:**

- **Animals:** Cat Hair, Canary Feather, Dog Hair and Sheep Hair
- **Plants:** Stem of Corn, Leaf of Nerium, Onion Rind and Silver Berry Scaly Hair
- **Insects:** Dragonfly Wing, Worker Bee Wing, Bee Antenna and Bee Abdomen
- **Textile Fibers:** Panya, Nylon, Wool and Handmade Paper
- **Tiny Creatures:** Common Red Sponge, Angora Rabbit Hair, Ant and Mouse Fur
- **Pollen and Spore:** Tulip Pollen, Leaf Spore, Pine Tree Pollen and Orange Pollen

Cat. No.	Description	Price
S8660	Prepared Slides Box 2 Only	16.00/Ea

## Life in a Drop of Water Basic Slide Set

Examine life in a drop of water.

**Set of six slides includes:**

- *Daphnia*, water flea, w.m.
- *Euglena viridis*, a common green flagellate with eyespot and flagellum, w.m.
- *Spirogyra*, a common alga with spiral chloroplasts, w.m. of vegetative filaments, carefully stained (standard slide for general study)
- *Anabaena*, thread-shaped blue-green algae with heterocysts w.m.
- *Paramecium*, macronuclei and micronuclei stained (typical slide for general study of this common ciliate)
- *Hydra*, extended specimen carefully stained for general body study, w.m. showing all details



**INCLUDES:**

Plastic box for 25 microscope slides

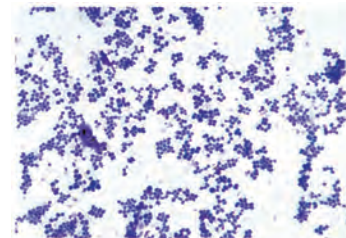
Cat. No.	Description	Price
S68790	Life in a Drop of Water Slide Set	114.00/Ea

## Bacteria Basic Slide Set

A variety of basic bacteria slides.

**Set of six slides includes:**

- *Staphylococcus aureus*, pus organism, smear from culture
- Bacteria from mouth, ideal for demonstrating Gram positive and negative bacteria
- *Streptococcus lactis*, milk souring organism, smear from culture showing short chains
- *Escherichia coli*, colon bacteria, smear
- *Spirillum volutans*, a very large spirillum, smear
- *Bacillus subtilis*, hay bacillus, smear showing bacilli and spores doubly stained



**INCLUDES:**

Plastic box for 25 microscope slides

Cat. No.	Description	Price
S68789	Bacteria Basic Slide Set	118.00/Ea



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MAKING SCIENCE MATTER

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## General Biology Slide Set

Prepared slides of animal and plant structures in whole mount (w.m.), longitudinal section (l.s.) and cross-section (c.s.) preparations.

Set offers 25 prepared slides of animal and plant structures in whole mount (w.m.), longitudinal section (l.s.) and cross-section (c.s.) preparations. Also available in CD-ROM format (see S500-CD).



### Zoology

- *Amoeba proteus*, w.m., showing nucleus and pseudopodia
- *Hydra*, w.m., extended, to show foot, body, mouth, and tentacles
- *Lumbricus*, c.s., back of clitellum showing muscular wall, intestine, typhlosole, and nephridia
- *Daphnia* and *Cyclops*, w.m., both specimens on slide
- *Musca domestica*, leg, fly with clinging pads (pulvilli)
- *Apis mellifica*, honeybee anterior and posterior wing
- **Squamous epithelium**, isolated (simple) from human cheek
- **Striated muscle**, l.s., showing nuclei and striations
- **Compact bone**, c.s., specially stained for lamellae, canaliculi
- **Human scalp**, l.s., showing hair follicles, sebaceous glands, epidermis
- **Human blood smear**, stained for red and white corpuscles

### Bacteria and Cryptogams

- **Bacteria from mouth, smear**, Gram stained showing bacilli, cocci, spirilli, and spirochaetes
- **Diatoms**, strewn slide of mixed species
- *Spirogyra*, vegetative filaments with spiral chloroplasts. *Rhizopus*, w.m., (or *Mucor*), mycelium and sporangia
- **Moss**, w.m., stem with leaves

### Botany: Phanerogams Slides

- *Ranunculus*, c.s., buttercup, typical dicot root
- *Zea mays*, c.s., corn, monocot stem with bundles
- *Helianthus*, c.s., sunflower, herbaceous dicot stem
- *Syringa*, c.s., lilac leaf, showing epidermis, palisade parenchyma, spongy parenchyma, and vascular bundles
- *Lilium*, c.s., lily, anthers with pollen grains and pollen sacs
- *Lilium*, c.s., ovary showing arrangement of ovules
- *Allium*, w.m., onion epidermis with cell nuclei
- *Allium*, l.s., onion root tip for mitosis, cell division

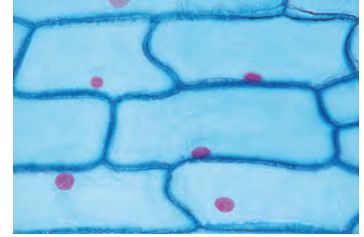
Cat. No.	Description	Price
S500	General Biology Set	119.00/Ea

## Plant Cells Basic Slide Set

Take a closer look at plant cells.

**Set of six slides includes:**

- Mitosis, l.s. from *Allium* root tips showing all stages of plant mitosis carefully stained with iron-hematoxyline after Heidenhain
- Epidermal cells of *Allium cepa* (onion), flat mount shows typical plant cells with nuclei, cytoplasm and cell walls
- Sieve plates in top view, t.s. of *Cucurbita* stem showing large structures
- *Spirogyra*, in scalariform conjugation and after the stage of conjugation showing zygotes, w.m.
- Wood cells, fibers and vessels of *Fagus*, beech, macerated and w.m.
- Starch grains, sec. of tuber of *Solanum tuberosum*, potato showing starch and cork cells



### INCLUDES:

Plastic box for 25 microscope slides

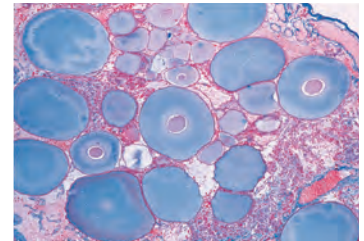
Cat. No.	Description	Price
S68787	Plant Cells Basic Slide Set	114.00/Ea

## Animal Cells Basic Slide Set

A variety of basic animal cell slides.

**Set of six slides includes:**

- **Squamous epithelium**, isolated cells from human mouth, smear
- Striated (skeletal) muscle l.s.
- Nerve cells and fibers in spinal cord of cat, t.s. routine stained
- Ovary of cat, t.s. for general study, shows primary, secondary and Graafian follicles
- Testis of rat, t.s. showing spermatogenesis
- Giant chromosomes, smear from salivary gland of *Chironomus*, carefully fixed and stained



### INCLUDES:

Plastic box for 25 microscope slides

Cat. No.	Description	Price
S68788	Animal Cells Basic Slide Set	115.00/Ea

## Animal Cell Set

Twelve slides show a variety of tissues.

Set contains 12 slides of animal cytology with depicted accompanying brochure. Epithelium, muscle, bone, nerve, internal organs, sex organs and chromosomes are all represented in this slide set. It shows a fine cross section of tissue types useful for classroom microscope study.



### Includes:

- Squamous epithelium, isolated cells from human mouth. Nuclei and cytoplasm are shown
- Striated muscle l.s. showing nuclei, striations, myofibrils
- Compact bone and hyaline cartilage t.s., two sections on one slide for comparison
- Nerve fibres isolated, fixed and stained by osmic acid to show myeline sheaths and Ranvier's nodes
- Liver of Salamandra t.s., showing simple animal cells with cellular membranes, nuclei, and cytoplasm
- Kidney of mouse, t.s. vital stained with trypanblue to demonstrate the storage of epithelial cells
- Ovary of cat, t.s. showing primary, secondary, and Graafian follicles
- Testis of frog, t.s. showing spermatogenesis. Spermatogonia, spermatocytes, spermatids, and mature spermatozoa
- Salamandra larva, t.s. of skin and other organs selected to show cell division (mitosis) in various stages
- Uteri of Ascaris megalocephala, t.s. iron hematoxyline stained to show details of meiosis with chromosomes and nuclear spindles
- Salivary gland of Chironomus larva. Giant chromosomes showing large chromomeres. Stained for DNA after Feulgen
- Ova from Psammechinus (sea urchin). Unfertilized ova, fertilized ova, early cleavage stages

Cat. No.	Description	Price
S5000	The Animal Cell 12 Slides	257.00/Ea

## Histology Slides for Blood Vascular System

Carefully prepared slides will be welcome additions to your classroom.

Also include a wide assortment of mammalian cells from epithelial, blood, muscle, nervous, and respiratory tissues. Also available are slides from other chordates.

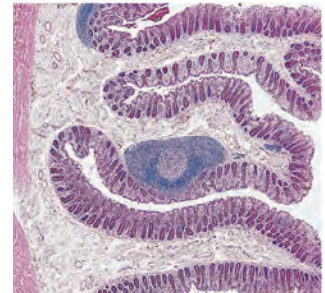
- Students can see detail available only from firsthand observation
- Groups of slides are shipped in a slide case for easy storage

Cat. No.	Description	Price
S12009	Vascular System Slide Set	8.50/Ea

## Histology of Mammalia Basic Slide Set

Precision slides are mounted by expert microtechnicians.

Basic set of 25 slides are created from fresh, top-quality specimens and expertly fixed, stained and hand-mounted by specialists in the field. Ultrasonically cleaned to eliminate striations and bubbles.



### INCLUDES:

- Squamous epithelium, isolated cells
- Fibrous connective tissue
- Adipose tissue, fat stained
- Hyaline cartilage, c.s.
- Compact bone, c.s.
- Striated muscle, l.s.
- Smooth muscle, c.s. and l.s.
- Blood smear, human
- Artery, c.s.
- Vein, c.s.
- Lung, c.s.
- Pancreas with islets of Langerhans, c.s.
- Tongue, c.s.
- Stomach, fundic region, c.s.
- Small intestine, c.s.
- Liver, c.s.
- Kidney, c.s.
- Ovary with developing follicles, c.s.
- Testis with spermatogenesis, c.s.
- Cerebrum, c.s.
- Cerebellum, c.s.
- Spinal cord, c.s.
- Nerve fibers isolated
- Motor nerve cells, smear from spinal cord
- Scalp, human, l.s. of hair follicles

Cat. No.	Description	Price
S2400	Histology of Mammalia, Elementary Set	275.00/Ea

## Human Hair Analysis Prepared Slides and Activity

Identify which "suspect" was at the scene of a crime using hair analysis.

Using a microscope, students compare an unlabeled hair sample with five known samples.



- Prepared slide set uses actual human hair
- Full-color overhead transparencies display size and structure of hair (cortex, medulla, cuticle, l.s. and t.s. of human scalp, etc.) using photomicrographs and color designs

### INCLUDES:

Teacher's illustrated guide, six slides (natural black, blond, red and brown hairs, plus two artificially blond hairs), three overhead transparencies, three sketches and worksheets and plastic box for the slides

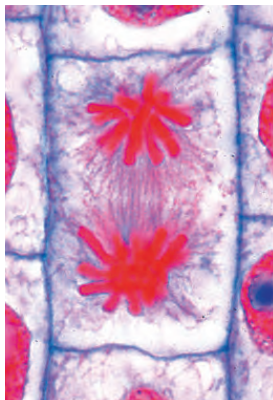
Cat. No.	Description	Price
S92001	Human Hair Slide Set	113.00/Ea

## Multimedia Packages: Mitosis and Meiosis

Six selected microscope slides with accompanying brochure.

### Teacher and Student Packages, set of six slides:

- Allium, root tips, I.s. showing lateral view of all stages of mitosis, iron-hematoxyline
- Whitefish mitosis, I.s. of embryo showing animal mitosis
- Testis of mouse, t.s. showing spermatogenesis in all stages
- Giant chromosomes from salivary gland of Chironomus, squash preparation special stained for chromomeres
- Liliium, microspore mother cells, prophase of first division showing meiosis
- Liliium, microspore mother cells, meta- or anaphase of first division, showing mitosis



### Teacher Package Adds:

- Six microscope slides in plastic box
- Three overhead projector color transparencies
- Six sketch- and worksheets
- Brochure with explanatory text
- Cardboard storage box

### Student Package:

- Six microscope slides in plastic box
- Brochure with explanatory text
- Cardboard storage box

Cat. No.	Description	Price
S90071A	Mitosis and Meiosis, Student Package	121.00/Ea

## Histology Slides for Fish

Agnatha, chondrichthyes, and osteichthyes mitosis, coregonus (whitefish), blastodisc; mitotic stages are all clearly depicted.

Also include a wide assortment of mammalian cells from epithelial, blood, muscle, nervous, and respiratory tissues. Also available are slides from other chordates.

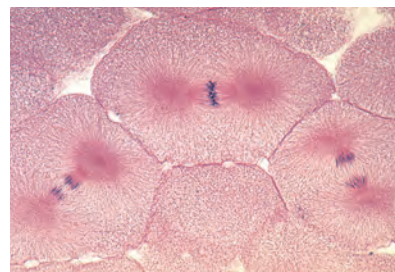
- Carefully prepared slides will be welcome additions to your classroom
- Students can see detail available only from firsthand observation
- Groups of slides are shipped in a slide case for easy storage

Cat. No.	Description	Price
S11465	Whitefish blastodisc slide showing mitosis	17.00/Ea
S11468	Whitefish blastodisc hematoxylin stain prepared slides; selected to show more mitotic figures	25.25/Ea

## Mitosis, Meiosis and Fission Set

Shows IPMAT in slides.

Set of five slides shows the stages of nuclear division, cytokinesis, reduction division and even fission in *Paramecium*.



### INCLUDES:

- *Vicia faba* (broad bean) root tip squash, showing all stages of mitosis, stained with Feulgen reaction for DNA. *Vicia* has 12 large chromosomes
- Whitefish mitosis, sections of *Coregonus* blasto-disc, all stages of mitosis shown
- Lily meiosis, first meiotic divisions in cross section of liliium anther
- Grasshopper Testis, I.s. to show spermatogenesis and spermiogenesis; stained with iron-hematoxylin
- *Paramecium caudatum* in fission, w.m. of mass culture including several specimens in fission

Cat. No.	Description	Price
S10044	Mitosis Meiosis and Fission	143.00/Pk

## Custom-Built Kits for Your Classroom



The Fisher Science Education team is proud to bring you the convenience of custom educational kits for elementary- to college-level instruction.

Visit [fisheredu.com/customkitting](http://fisheredu.com/customkitting) to learn more.

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## Animal Science

## Deluxe Owl Pellet Dissection Lab Activity

Deluxe Owl Pellet Dissection Lab Activity can teach students the concepts of food webs and food chains while identifying the small animals that are prey for the owls.



- Owls have a specialized digestive tract which helps them expel the indigestible parts of their prey in pellet form
- The pellets are heat sterilized and individually wrapped

### Kit Includes:

- 15 Owl Pellets
- 30 Dissecting Probes
- 15 Forceps
- 15 Plastic Rulers
- 15 Hand Magnifiers
- 60 Nitrile Gloves

### ⚠ ALERTS:

**WARNING:** This product can expose you to chemicals including Lead and Lead Compounds, which are known to the State of California to cause cancer and reproductive harm.

Cat. No.	Description	Price
S29557	Deluxe Owl Pellet Dissection Lab Activity	98.00/Ea

## Barn Owl Pellets

Owl Pellets are a natural educational tool that are useful in introducing students to the nature of food chains, skeletal anatomy, and the identification of prey taken by the barn owl. Consisting mainly of undigested hair and bones, owl pellets are fascinating to investigate and analyze.

- Grade A quality
- Pack of 10



Cat. No.	Description	Price
S19366NB	Barn Owl Pellets	43.25/Pk

## Barn Owl Pellets

Students learn the nature of food chains and how to demonstrate the role of predators in the ecosystem.

- Pellets are collected from natural nesting and roosting sites of the barn owl
- Each pellet is unique in size, shape and contents
- Average size of pellet is 2.5 to 3 in. (6.3 to 7.6cm) long
- Heat sterilized and individually wrapped in foil



Cat. No.	Description	Average Size (L)	Quantity	Price
S04784	Small Barn Owl Pellets	< 1.5 in.	20	54.00/Ea
S04621	Large Barn Owl Pellets	2.5 to 3 in.	15	56.50/Pk
S04622	Large Barn Owl Pellet	2.5 to 3 in.	1	24.25/Ea

## Owl Pellets

Pellets are extensively processed to thoroughly remove all moisture and ensure that any organisms or bacteria is destroyed.

- Collected from barn owls
- Sold in packs of 10

Cat. No.	Description	Price
S19366DP	Owl Pellets	32.00/Pk

## Classroom Owl Pellet Kit

Economical and complete for individualized learning.

Kit provides all of the materials necessary to perform an analytical analysis of the owl's habitat, its primary food source and its relationship in the food chain.

### ORDERING INFORMATION:

Class size: 30 students.

### INCLUDES:

15 heat sterilized, individually wrapped barn owl pellets from the Pacific Northwest; poster depicting the food web in a typical barn owl community; poster of the skeleton of the vole (the most common food of barn owls); bone sorting chart; complete teaching guide containing background information, suggested teaching strategies, a laboratory guide, suggestions for collecting owl pellets and references



Cat. No.	Description	Price
S19366B	Owl Pellet Kit	89.00/Ea

## Lab-Aids™ Owl Pellet Study Kit

Designed for an in-depth study of owls and their prey.

Advanced kit is designed for an in-depth study of owls and their prey. The kit provides extra identification materials such as illustrations of prey, bone sorting chart and 15 keys to mammals commonly eaten by owls. Keys are especially valuable for identifying mammals by the fur found in the pellets. Definite species of voles and mice can be identified by the additional skeletal clues provided.

### ORDERING INFORMATION:

Class size: 30 students.

### INCLUDES:

- 15 owl pellets collected from one region, fumigated, individually wrapped and treated with dichloride
- 15 teasing needles
- 30 worksheets
- 15 specimen identification sorting charts
- 15 keys to mammals commonly eaten by owls
- Manual and background information



Cat. No.	Description	Price
S19366	Owl Pellet Study	137.00/Ea

## Lab-Aids™ Natural Selection Experiment Kit

Replicate the 'peppered moth' study in the lab, simulate predator-prey relationship, illustrate Darwin's Theory of Natural Selection and industrial melanism and collect data and draw conclusion concerning natural selection and environmental pollution.

In the 1950s, Oxford University scientist Dr. Bernard Kettlewell studied the changes in England's peppered moth population. Over a hundred year time period, the population of peppered moth shifted from being primarily light-colored moths to dark-colored moths. Dr. Kettlewell reasoned that predatory birds fed on more light-colored moths because they were more easy to spot against the pollution-darkened tree bark. This meant that the dark-colored moths survived in greater numbers, and the genes for their dark coloring were passed down to future generations. Using Dr. Kettlewell's study as the basis for experimentation, students conduct two simple quantitative lab activities that demonstrate the effects of environmental pollution on nature.

Accommodates unlimited classes, each with 6 groups of 4 students. Includes teacher guide, student sheets and assessment questions.



Cat. No.	Description	Price
S19454	Natural Selection Expmnt	74.25/Ea

## Lab-Aids™ Classifying Animals

Construct and compare classification systems, describe characteristics used to define phyla, identify several invertebrate phyla and understand the relationship between kingdom and phylum.

How and why do biologists classify animals? Students will work together to arrange a set of 18 Animal Cards into groups and then adjust their groupings as they learn how scientists classify animals into phyla. By identifying the common features of animals within each phylum, students will learn what kinds of characteristics define the major animal phyla. Each card provides a color photo of an organism as well as relevant information about skeletal, circulatory, and respiratory systems. Students will review the relationship between kingdom and phyla by placing the Animal Cards within a set of Classification Cards that summarize the five major kingdoms. This kit is complete for 32 students and is reusable.

### INCLUDES:

Teacher's guide; 8 sets of 18 Animal Cards; 8 sets of 5 Classification Cards; 32 student worksheets and guides; 32 student data sheets: Biologists Classification

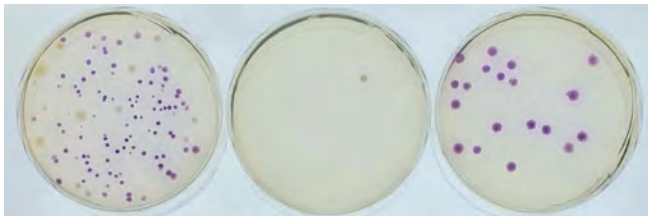


Cat. No.	Description	Price
S90183	Classifying Animals Kit	85.00/Ea

## Battling Bacteria: Ecosystem Dynamics in a Petri Dish Kit

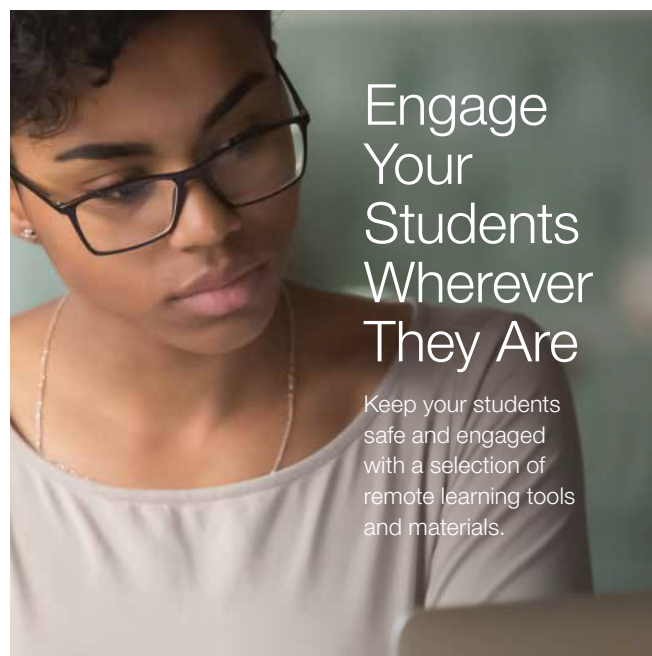


Students create their own microbial ecosystems to investigate the dynamics of competition and abiotic/biotic change on community composition. By using bacteria with short generation times students can observe, test, and collect their own data on key ecological phenomena in a single week!



- Storage: Some Components Require Refrigerator and Freezer Storage
- Complete in 1 Week
- For 10 Lab Groups

Cat. No.	Description	Price
S27558	Battling Bacteria Ecosystem Dynamics Kit	119.00/Ea



## Engage Your Students Wherever They Are

Keep your students safe and engaged with a selection of remote learning tools and materials.

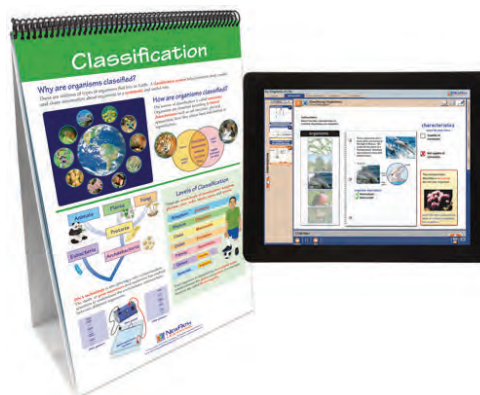
Visit [fisheredu.com/remoteteaching](https://fisheredu.com/remoteteaching) to learn more.

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## Six Kingdoms Flip Chart with Online Multimedia Lesson



Combine illuminating graphics and write-on/wipe-off exercises with multimedia lessons to master key life science topics.



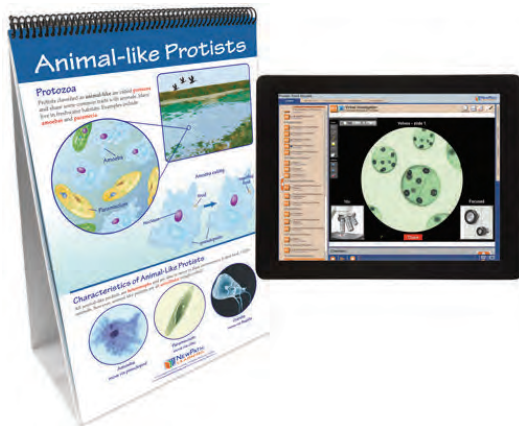
- Provides graphical instruction and write-on/wipe-off activities with one-year online access to a corresponding Multimedia Lesson featuring in-depth, interactive coverage of the concept
- The Multimedia Lesson can be accessed by a teacher and ALL of your students anywhere, anytime, on any device – including Chromebooks, tablets, computers and mobile devices.
- Flip Chart Set features 10 Laminated, Double-Sided Charts
- Side 1 features a graphic overview of the topic while Side 2 provides corresponding write-on/wipe-off activities for review and reinforcement
- Includes a Teacher Guide with copymaster activities and review questions
- Spiral-bound and mounted on a sturdy easel for years of use, the Flip Chart sets are ideal for small group instruction, learning centers, independent use or classroom reference
- Also included is one year access to a corresponding online multimedia lesson for a teacher and all their students
- Each lesson features Animated, Narrated Tutorials; Interactive Exercises & Activities; Virtual Lab Investigations; Illustrated, Narrated Glossary; Visual Resource Library; and an Inquiry-Based Student Activity Guide
- Developed under sponsorship of the National Institutes of Health (NIH), the lessons are perfect for individual student instruction on any computer as well as classroom presentation on any Interactive Whiteboard
- Covers: Classification; The Six Kingdoms of Life; Archaeobacteria & Eubacteria; Protista; Fungi; Plant Kingdom; Plants with Seeds; Animal Kingdom; and Vertebrates & Invertebrates

Cat. No.	Description	Price
S81110	Six Kingdoms Flip Chart with Online Multimedia Lesson	50.00/Ea

## Protists: Pond Microlife Flip Chart with Online Multimedia Lesson



Combine illuminating graphics and write-on/wipe-off exercises with multimedia lessons to master key life science topics.



- Provides graphical instruction and write-on/wipe-off activities with one-year online access to a corresponding Multimedia Lesson featuring in-depth, interactive coverage of the concept
- The Multimedia Lesson can be accessed by a teacher and ALL of your students anywhere, anytime, on any device – including Chromebooks, tablets, computers and mobile devices.
- Flip Chart Set features 10 Laminated, Double-Sided Charts
- Side 1 features a graphic overview of the topic while Side 2 provides corresponding write-on/wipe-off activities for review and reinforcement
- Includes a Teacher Guide with copymaster activities and review questions
- Spiral-bound and mounted on a sturdy easel for years of use, the Flip Chart sets are ideal for small group instruction, learning centers, independent use or classroom reference
- Also included is one year access to a corresponding online multimedia lesson for a teacher and all their students
- Each lesson features Animated, Narrated Tutorials; Interactive Exercises & Activities; Virtual Lab Investigations; Illustrated, Narrated Glossary; Visual Resource Library; and an Inquiry-Based Student Activity Guide
- Developed under sponsorship of the National Institutes of Health (NIH), the lessons are perfect for individual student instruction on any computer as well as classroom presentation on any Interactive Whiteboard
- Covers: What is a Protist?; Plant-Like Protists; Euglena; Volvox; Spirogyra; Animal-Like Protists; Amoeba; Paramecium; and Fungus-Like Protists

Cat. No.	Description	Price
S81105	Protists: Pond Microlife Flip Chart with Online Multimedia Lesson	50.00/Ea

## Animal Cell Model

Colorful teaching model designed specifically for hands-on use.



- Five inquiry-based activities cover cell structure and function, osmosis, eukaryotes, bacteria and more
- Suitable for elementary through middle school
- Resilient, nontoxic EVA-foam construction withstands years of active investigation
- Dimensions: 11L x 11W x 14.5 in.H (27.9 x 27.9 x 36.8cm)
- Grades K-middle school

**INCLUDES:**

- Detailed teacher's guide
- Reproducible worksheets
- Reference information
- Cross-curricular extensions
- Assessments

Cat. No.	Description	Price
S94386	Animal Cell Model	87.40/Ea

## Simple Animal Cell 3-D Model Kit



Assemble and use 3-D models to visualize and investigate key science structures.



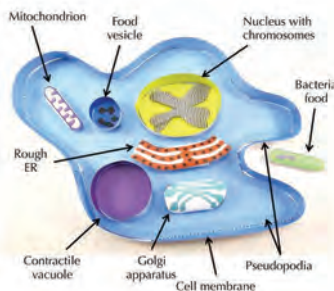
- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81461	Simple Animal Cell 3-D Model Kit	37.50/Ea



## Amoeba 3-D Model Kit

Assemble and use 3-D models to visualize and investigate key science structures.



- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81442	Amoeba 3-D Model Kit	37.50/Ea

## Frog Life Cycle 3-D Model Kit

Assemble and use 3-D models to visualize and investigate key science processes.



- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81455	Frog Life Cycle 3-D Model Kit	37.50/Ea

## Insect X-Ray and Picture Cards

Insect X-Ray and Picture Cards allow users to match up the insect x-rays to the double sided, sturdy picture cards to see straight through the insects



Discover what it means to be an entomologist, the branch of zoology that studies insects with this set of X-Rays and picture cards.

- Learn the parts of an insect - head, thorax and abdomen
- See how very different creatures can have very similar structures
- See straight through the insects, from the top, through the inside, to the bottom
- Teacher guide details each insect
- Includes 36 double sided picture cards and 36 x-rays, 4 x 6 in. (10 x 15 cm)

Cat. No.	Description	Price
S40798	Insect X-Ray and Picture Cards	26.75/Ea

## Eisco™ Wooden Insect Storage Box

Eisco™ Wooden Insect Storage Box suits all insect collectors with a perforated chamber and soft pad lining for pinning and displaying specimens.

- Glass front insect storage box
- Made from polished wood
- Includes 2 polished brass clasps for secure closure
- Bottom lined with thick pad for pinning insects
- Glazed inside with white art paper
- Double walled, perforated fumigation chamber
- Length: 44.5 cm



### WARRANTY:

1 year limited manufacturer warranty

Cat. No.	Description	Price
S89502	Wooden Insect Storage Box	102.00/Ea

## Botany

## Simple Plant Cell 3-D Model Kit

Assemble and use 3-D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home



**NEW**

Cat. No.	Description	Price
S81463	Simple Plant Cell Model	32.75/Ea

## Eisco™ 3-D Plant Cell Model

The detailed 3D rendering of a greatly magnified plant cell, with its vibrantly colored cell structures and organelles, is ideal for studying the structure and function of the various features of a plant cell.

The model includes the peroxisome, Golgi apparatus, nucleus, nucleolus, nuclear envelope, endoplasmic reticulum, ribosomes, chloroplast, cytoskeleton, cell wall, plasma membrane, mitochondria, vacuole, and cytoplasm. Key features are colored and numbered for comparison with the key that is included. This model provides a visually and kinesthetically effective method for studying the structure and function of the various cell structures and organelles of a plant cell.



- Vividly hand painted
- Dimensions: 11.5 X 10 X 2 in.
- Identification Key Card included
- Greatly enlarged
- Base dimensions: 16 X 12 X 1 in.

Cat. No.	Description	Price
S12903	3-D Plant Cell Model	287.00/Ea

## 3B Scientific™ Plant Cell Model

Magnified 500,000 to 1,000,000 times.

- Two-piece model presents the structure of a typical plant cell with cytoplasm and cell organelles as viewed from an electron microscope
- All important organelles are raised and displayed in color
- Dimensions: 7.8 x 5.5 x 12.6 in. (20 x 14 x 32cm)



### Displays:

- Cell wall
- Cell membrane
- Nucleus
- Smooth endoplasmic reticulum
- Rough endoplasmic reticulum
- Ribosomes
- Chloroplasts
- Mitochondria
- Dictyosomes/ Golgi apparatus

Cat. No.	Description	Price
S96171	Two-piece Plant Model	428.00/Ea

## Eisco™ Typical Flower Standing Model

Hand painted, break resistant plastic typical flower model is a great aid for teaching angiosperm pollination and fertilization

- Model of a greatly enlarged, idealized Typical Flower
- Break-resistant plastic
- Mounted on a base
- Numbered with English Key Card
- Perfect for teaching angiosperm pollination and fertilization



**NEW**

Cat. No.	Description	Price
S80809	Typical Flower Standing Model	89.00/Ea

## Eisco™ Detachable Flower Model

Detachable model of flower for botanical study.

- Ovary with single interior ovule
- Fixed on base
- Numbered with English Key Card
- L x W x H: 42 x 22 x 33cm (16.5 x 8.6 x 13 in.)



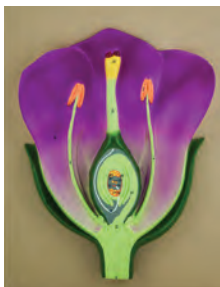
Cat. No.	Description	Price
S15626	Detachable Flower Model	80.00/Ea

## Eisco™ Typical Flower Model



Depicts internal structures, including reproductive parts of a typical flower

- Typical flower model for biological study
- Three dimensional details depict internal structures
- Numbered with key card for identification of features
- Mounted on a base for display
- Hand painted
- Perfect for any classroom
- 2.5 in.



Cat. No.	Description	Price
S80810	Typical Flower Model	62.75/Ea

## Dicotyledon Stem Model



Modeled after a sunflower, this one year dicot stem gives anatomy in cross, radial and tangential sections. Shows epidermis, cork layer, phloem region, cambium, xylem region, pith and vital structures.

- 45X enlarged model of one year old sunflower dicot stem
- Cross, radial, and tangential sections display epidermis, cork layer, phloem region, cambium, xylem region, pith and vital structures in great detail
- Designed and built to be as accurate as possible
- Perfect for students and teachers
- Made of plastic and includes diagram



Cat. No.	Description	Price
S80990	Dicotyledon Stem Model	58.50/Ea

## Dicot Flower Model

Allows students to easily study the floral components and reproductive functions of flowers.

Enlarged to approximately eight times life size.

- Can be disassembled to reveal the pollen grains inside and show the process of pollination
- Structures are numbered on the flower model and correspond to an identification key
- Dimensions: 17.7 x 15.7 x 12 in. (45 x 39.9 x 30.5cm)



Cat. No.	Description	Price
S06699	Dicot Flower Model	155.00/Ea

## Eisco™ Plant Mitosis Model



Made up of a set of 10 models that each depict a separate phase of plant mitosis

- Set of 10 smaller models
- Individual models each depict a different phase of plant mitotic division
- Numbered with English key card
- Perfect for any classroom



Cat. No.	Description	Price
S80811	Plant Mitosis Model	97.00/Ea

## Photosynthesis & Cellular Respiration Flip Chart with Online Multimedia Lesson



Combine illuminating graphics and write-on/wipe-off exercises with multimedia lessons to master key life science topics.

- Provides graphical instruction and write-on/wipe-off activities with one-year online access to a corresponding Multimedia Lesson featuring in-depth, interactive coverage of the concept
- The Multimedia Lesson can be accessed by a teacher and ALL of your students anywhere, anytime, on any device – including Chromebooks, tablets, computers and mobile devices.
- Flip Chart Set features 10 Laminated, Double-Sided Charts
- Side 1 features a graphic overview of the topic while Side 2 provides corresponding write-on/wipe-off activities for review and reinforcement
- Includes a Teacher Guide with copymaster activities and review questions
- Spiral-bound and mounted on a sturdy easel for years of use, the Flip Chart sets are ideal for small group instruction, learning centers, independent use or classroom reference
- Also included is one year access to a corresponding online multimedia lesson for a teacher and all their students
- Each lesson features Animated, Narrated Tutorials; Interactive Exercises & Activities; Virtual Lab Investigations; Illustrated, Narrated Glossary; Visual Resource Library; and an Inquiry-Based Student Activity Guide
- Developed under sponsorship of the National Institutes of Health (NIH), the lessons are perfect for individual student instruction on any computer as well as classroom presentation on any Interactive Whiteboard



- Covers: Cell Energy; Leaf Structure & Photosynthesis; Process of Photosynthesis; Effects of Light & CO<sub>2</sub> on Photosynthesis; Cellular Respiration; Connection between Photosynthesis & Respiration; and Fermentation

Cat. No.	Description	Price
S81107	Photosynthesis & Cellular Respiration Flip Chart with Online Multimedia Lesson	50.00/Ea

## Photosynthesis Light Reactions 3-D Model Kit



Assemble and use 3-D models to visualize and investigate key science processes.



- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81460	Photosynthesis Light Reactions 3-D Model Kit	37.50/Ea

## Chloroplasts 3-D Model Kit



Assemble and use 3-D models to visualize and investigate key science structures.



- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend and Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop and use models to represent structures, systems and processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81445	Chloroplasts 3-D Model	37.50/Ea

## Advanced Placement Laboratory Kit 4: Plant Pigment Chromatography and Photosynthesis

Experiment demonstrates light-dependent reactions of photosynthesis by colorimetric assay, and helps students to gain an understanding of the biochemical processes by which they work.



Reformulated solvent systems are less flammable and less toxic than commonly used ether and acetone systems.

- Gain an understanding of the theory and applications of chromatography
- Use thin layer chromatography to separate plant pigments carotene, xanthophyll, and chlorophyll
- Perform an assay of the light reactions of photosynthesis using intact chloroplasts and the dye DCIP

### ORDERING INFORMATION:

Class size: 10 laboratory groups (40 students).

#### INCLUDES:

- Instructions
- Chloroplast extraction
- Dilution buffers
- Reducing reagent
- DCIP
- Standard pigments
- Chromatography solvent
- Sarkosyl
- Thin layer cellulose chromatography plate
- Microliter capillary pipets
- Tubes
- Transfer pipets.

#### REQUIRES:

- Visible wavelength spectrophotometer (see S42669ND)
- Pencils
- Clinical benchtop centrifuge
- Metric rulers
- Test tube racks
- Flood light or small portable lamps (60w is sufficient)
- Pipet pumps or bulbs
- Distilled water
- Test tubes, 10mL (13 × 100mm)
- Beakers, 100mL
- Pipets, 1 and 5mL
- Ice
- Cheesecloth
- 95-100% isopropanol† (2-propanol)
- Aluminum foil
- Fresh spinach

Cat. No.	Description	Price
S11284	AP Lab Kit 4: Plant Pigment Chromatography and Photosynthesis	140.00/Ea

† Rubbing alcohol will not work, as it is only 70% isopropanol.

## Lab-Aids™ Photosynthesis Activity Kit

Use atom models to build carbon dioxide and water molecules then 'react' them to form sugar and oxygen molecules.



To reinforce and extend the concepts from the first activity, students then read about plants essential role as producers, using the process of photosynthesis to convert carbon dioxide, water, and energy contained in light into energy stored in the bonds of sugar, and other food molecules. Students are also introduced to chloroplasts, plant organelles involved in photosynthesis. All equipment is reusable and will provide years of use.

### ORDERING INFORMATION:

This kit is designed for use with six groups of no more than five students. If any class has more students than this kit accommodates, extra components can be obtained. Each Enlarge-A-Lab kit contains enough materials for one additional student group.

### INCLUDES:

- 28 student worksheets and guides
- Teacher's guide
- 12 sets of eight model carbon atoms (black spheres with four pegs)
- 12 sets of 15 model hydrogen atoms (white cylinders with one peg)
- 12 sets of 20 model oxygen atoms (blue cylinders with two pegs)
- 12 sets of 40 model covalent bonds (white tubes)
- Transparency 1: Modeling Photosynthesis
- Transparency 2: Comparing Plant and Animal Needs

Cat. No.	Description	Includes	Price
S98808	Photosynthesis Activity Kit	Materials for 28 students	103.00/Ea
S98808A	Photosynthesis Enlarge-A-Lab Kit	Materials for additional student group of up to 5 students	16.25/Ea

## Modeling Photosynthesis and Cellular Respiration Lab Investigation

Model reactants and products of photosynthesis and cellular respiration.

- Research-Based hands-on lab investigation system
- Developed with support from National Institutes of Health (NIH)
- Students use snap beads to model reactants and products of photosynthesis and cellular respiration
- Helps compare and contrast photosynthesis and cellular respiration
- Includes one lab station
- For Grades 6, 7, 8

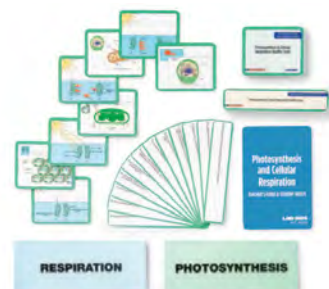


Cat. No.	Description	Price
S14115LAB	Modeling Photosynthesis and Cellular Respiration Lab Investigation	17.50/Ea

## Lab-Aids™ Photosynthesis and Cellular Respiration

Make accurate interpretations, inferences, and conclusions with this kit.

Part One is an investigation into the reactions of photosynthesis and cellular respiration using a series of images and statements. Students then discuss these processes relative to ecosystems and the carbon cycle. In Part Two, students read about the details of photosynthesis and cellular respiration, including light and dark reactions, glycolysis, the Krebs cycle, and the electron transport chain. All equipment is reusable and will provide years of use. Includes Teacher guide and student sheets.



### INCLUDES:

Teacher's guide, 28 student worksheets and guides, 6 sets of 8 photosynthesis and cellular respiration cards, 6 sets of 12 photosynthesis and cellular respiration strips, 6 sets of 2 category cards, 1 transparency 1: Kelp Forest Food Web

### REQUIRES:

Conductivity indicators

Cat. No.	Description	Price
S02447	Photosynthesis and Cellular Respiration Kit	107.00/Ea

## Photosynthesis and Respiration Chamber

Monitor the cycle of photosynthesis and respiration of plants using O<sub>2</sub>, CO<sub>2</sub> and light sensors over several days.

Supplied with respiration chamber, #0 and #7 rubber stoppers, instructions.

### REQUIRES:

NeuLog™ Oxygen Logger Sensor (S98243-8ND), CO<sub>2</sub> Logger Sensor (S98243-3ND), and Light Logger Sensor (S98243-20ND); sensors not included

### ⚠️ ALERTS:

**WARNING: This product can expose you to chemicals including Phthalates, which is known to the State of California to cause and reproductive harm.**



Cat. No.	Description	Price
S02141**	Photosynthesis and Respiration Chamber	37.75/Ea

## Kemtec™ Plant Cancer Kit

Kemtec™ Plant Cancer Kit allows students to investigate cancer in the laboratory.



- Students safely explore aspects of cancerous cell growth with this self-contained kit.
- A fresh carrot is required but not provided.
- Experiments enable students to visualize the differences between normal cells and cancerous cells, describe similarities and differences between animal and plant cancers, identify cancer cells, identify a plant cancer or gall, and research current theories on the causes of cancer.
- Students grow their own sunflower plants; then induce crown gall by inoculating plant tissue with *Agrobacterium tumefaciens* (reply card item ships upon request and only in Continental US) which is required for inducing the cancerous growth.
- Students then do a Koch's Postulates Experiment: Inducing Cancer in Carrot Tissue.
- Allow 3 to 4 weeks if growing plants prior to inoculation and 3 to 4 weeks for tumor growth.
- Experiment requires approximately one hour of lab time.
- Designed for 24 students.
- Recommended in conjunction with Koch's Postulate Experiment so as to use the same *Agrobacterium tumefaciens* culture or sub-culturing for later use.
- Kit requires a free USDA permit for handling *Agrobacterium tumefaciens* to be obtained before the organism can be shipped.



- Meets National Standards for Grade Levels 9 to 14

Cat. No.	Description	Price
S27529	Plant Cancer Kit	222.00/Ea

## Kemtec™ Plant Cloning II Kit

Kemtec™ Plant Cloning II Kit allows users to generate a plant by cloning its tissue in an exciting and challenging experience introducing students to biotechnology and sterile technique.



- Students will establish a shoot multiplication culture using an African violet model, use sterile technique to develop African violet cloned cultures and induce the development of multiple shoots (clones) from the leaf tissue.
- Resulting plantlets may be started in soil.
- The complete process takes approximately three months.
- No hood or incubator is required.
- Includes an instruction manual and a flash drive with a presentation including images of plant material at various stages of the experiment.
- Perishable reply card items ship separately upon request and only in the continental US.
- Meets National Standards for Grade Levels 9 to 14.



Cat. No.	Description	Price
S27530	Plant Cloning II Kit	290.00/Ea

## Lab-Aids™ Variation: The Normal Distribution of the Characteristics of a Species

Observe physical characteristics, create a histograms and linear graphs from collected data and discover the effects of pooling data, explore variation in nature.

Variation in species and normal distribution are brought to life as students use Lab-Aids™ exclusive Variation Profile Tubes. They gain experience in constructing visual graphs, histograms and linear graphs from data collected by the entire class. The idea that greater validity of information gathered from a large sample versus a smaller sample is illustrated beautifully by comparing class results in the Variation Profile Tubes to the student's own histograms and graphs. This is an excellent activity for introducing statistics in science. Continuous and discontinuous variation is explained in the activity as well as the normal distribution of the 'bell curve'. Accommodates unlimited classes, each with 30 groups of one-two students.



### INCLUDES:

- 30 packages of jumbo, striped sunflower seeds
- 13 variation profile tubes
- Variation profile tube holder
- 30 student worksheets and guides
- Instruction manual

Cat. No.	Description	Price
S94547	The Normal Distribution of the Characteristics of Species Kit	108.00/Ea



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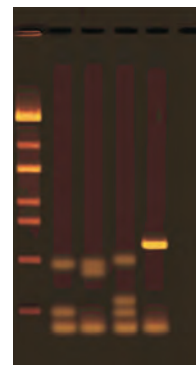


\* California - WARNING: Cancer [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)  
 \*\* California - WARNING: Reproductive Harm [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)  
 \*\*\* California - WARNING: Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## Exploring Plant Diversity with DNA Barcoding Experiment Kit

Students explore the genetic diversity of ten selected plants in this experiment. Exploring Plant Diversity with DNA Barcoding Experiment Kit used to generate unique identification profiles for each plant.

- Students isolate plant DNA and use PCR to amplify two polymorphic regions of the chloroplast genome
- Digestion of PCR products and analysis by agarose gel electrophoresis used for unique identification profiles for each plant
- For 10 Lab Groups
- DNA Isolation (2 hrs) Set-Up (30 min)  
DNA Digest (60 min)
- Requires wet ice shipment for next day delivery



### INCLUDES:

Instructions, PCR EdvoBeads™, Primer G Mix Concentrate, Primer LP Mix Concentrate, EdvoQuick™ DNA Ladder, Control DNA Concentrate, TE Buffer, Proteinase K, NaCl Solution, DNA Extraction Buffer, Restriction Enzyme Reaction Buffer, Restriction Enzyme Dilution Buffer, AluI Restriction Enzyme, UltraSpec-Agarose™, 10X Gel Loading Solution, 50X Electrophoresis Buffer, InstaStain™ Ethidium Bromide, FlashBlue™ Liquid Stain, Micropestles, Microcentrifuge & PCR Tubes, & Wax Beads

### REQUIRES:

Thermal cycler, centrifuge, isopropanol, distilled water, electrophoresis apparatus, power supply, adjustable micropipets and tips, microwave or hot plate, waterbath, UV transilluminator.

Cat. No.	Description	Price
S29017	Exploring Plant Diversity with DNA Barcoding Experiment Kit	233.00/Ea

## Dose Makes Poison: Testing Environmental Impacts of Pollution Experiment Kit

Allows scientists to determine the effects of given substance on living organisms.

- Biological assay for environmental pollution
- Inquiry-based lab students plan and perform plant bioassay
- Determines environmental hazard of common point and non-point source pollutants
- Results analyzed using averages, standard deviations, TC50 calculations, integrating STEM



Cat. No.	Description	Price
S42876	Dose Makes Poison: Testing Environmental Impacts of Pollution Experiment Kit	146.00/Ea

## Lab-Aids™ Investigating Plant Macronutrients Using Hydroponics

Observe plants growing in a nutrient solution, study and compare seed germination time and plant growth time, observe development of roots, stems and leaves, study effects of nutrient deficiency, use controls in experiments and understand hydroponics.

Do plants only grow in soil? Not always. Sometimes they grow in water. This stimulating and fun kit includes uniquely designed Lab-Aids™ transparent plastic culture chambers that allow students to ‘clearly’ view plant growth and development in various nutrient solutions. The following experiments are included: Seed germination time comparisons; Plant growth time comparisons; Effects of nutrient deficiency; An understanding of hydroponics. This highly graphic and unique activity can be used individually or in groups at many grade levels. It is an excellent activity for science fairs or projects. Accommodates 2 classes, each with 6 groups of 4 students. Includes Teacher guide, student sheets, assessment questions and SDS for all chemicals.

### INCLUDES:

Teacher’s guide; MSDS packet; 28 student worksheets and guides; 36 germinating plugs; 6 greenhouses with detachable vented roofs; 6 germinating floats; 6 light shields for greenhouses; 5 seed packets; 1 bottle of each solution: Iron Chelate, Trace Element,  $\text{Ca}(\text{NO}_3)_2$ ,  $\text{CaCl}_2$ ,  $\text{KCl}$ ,  $\text{KNO}_3$ ,  $\text{MgSO}_4$  and  $\text{KH}_2\text{PO}_4$

### REQUIRES:

This lesson requires several weeks of observation following the initial setup lesson



Cat. No.	Description	Price
S20961	Kit: Investigating Plant Macronutrients Using Hydroponics	162.00/Ea

## Lab-Aids™ Plant Cloning: Propagating Cuttings

This life science kit provides students with specially designed materials that make it easy to clone plants through the process known as asexual plant propagation.

This activity requires no special facilities for plant propagation because the Lab-Aids™ Greenhouses automatically control many environmental conditions. The Lab-Aids™ Greenhouse was designed for small, controlled investigations and this easy-to use apparatus allows students to readily observe plant physiology, particularly root development. Accommodates 1 class with 6 groups of 4 students. Includes Teacher guide, student sheets, assessment questions, and SDS.

### INCLUDES:

Teacher’s guide; MSDS booklet; 28 student worksheets and guides; 6 Lab-Aids™ greenhouses with detachable vented roof; 6 light shields for greenhouses; 6 graduated sticks; 6 usage guides; 3 bags of growth medium; 2 30mL bottles of root inducing hormone



Cat. No.	Description	Price
S20963	Kit: Plant Cloning - Propagating Cuttings	151.00/Ea

## Lab-Aids™ A Study of Enzymes in Seeds Kit

Understand process of starch digestion by plant enzymes, locate starch granules in two seed types and test catalytic strength of enzymes. Determine time factors for enzymatic starch digestion and the relative strength of enzymes.

Gain a complete understanding of the process of starch digestion by plant enzymes by using this individualized lab activity. Seeds that have been soaked overnight are used to illustrate several concepts.

### ORDERING INFORMATION:

Number of students: 30

Number of groups: Maximum 15 groups

### INCLUDES:

1 Teacher’s Guide with MSDS; 30 Student Worksheets and Guides; 15 Treating dishes, 3-section clear plastic; 3 Lugol’s solution, bottle; 18 Droppers; 1 Absorbent paper, pkg; 5 Soaking containers with bean seeds; 5 Soaking containers with pea seeds



Cat. No.	Description	Price
S20670	Kit: A Study of Enzymes in Seeds	108.00/Ea



## Hydroponics Lab

Get a 360° view of growing plants from the roots up.

Use for science fair projects — this set of three growing tubes is a mess-free way to explore hydroponics with water or any media.



- Supports hands-on science inquiry as students conduct controlled experiments
- Provides a view of growing seedlings — transparent seed basket shows how the plant grows both up and down
- Reveals plant roots — no soil required
- Provides a write-and-wipe surface for specimen labels
- Engages children in science learning, whether at school or home

### ORDERING INFORMATION:

Grades K+.

### INCLUDES:

Three shatterproof plastic test tubes measuring 1.75 in. dia. x 7 in. H, three stands, three support rod tops, three support rod bottoms, three seed baskets and Activity Guide

Cat. No.	Description	Price
S01904	Hydroponics Lab	27.00/Ea

## Diversified Spaces™ Hydroponics Growing System

Self-contained ebb and flow hydroponics center with grow lights and water pump.

The perfect way to learn how plants can grow without soil and helps teach the basic concepts for the plants needs, nutrition, food production, recycling, agricultural technology and soil-less growing environments.



- Mobile hydroponics center includes grow lights and water pump
- Adjustable timers enable plant growth with the perfect amount of water and sunlight
- Construction allows easy access for students and teachers alike
- Made of solid maple and maple veneers
- Containment plant tray is 8 x 27.5 x 42 in. (H x D x W)
- 25 gallon nutrient reservoir with lid, a locked cabinet for timers and air pump, and a 150 watt grow light
- Growing system is completed with a submersible pump, an air pump, an air stone, timers (2), hoses and ten 6 inch net pots
- Unit moves easily on 4 inch locking, leveling casters
- Overall dimensions (W x D x H): 52 x 28 x 78 in.

Cat. No.	Description	Price
S14215	Hydroponics Growing System	1786.00/Ea

## Plant Trays

Perfect seed starters that never rot or rust.



- Made of high-impact polystyrene
- Can also be used for a variety of laboratory applications
- Nest for easy storage

Cat. No.	Depth	Length	Width	Price
S17640	2.5 in.	4 in.	8 in.	3.00/Ea
S17641	2.5 in.	8 in.	8 in.	4.00/Ea
S17642	2.5 in.	8 in.	12 in.	7.25/Ea
S17644	3.5 in.	13 in.	15 in.	12.00/Ea

## Growth Chamber

Versatile, programmable growth chamber is perfect for plants, animals and cultures.



- ON/OFF indicator lights show chamber status at a glance
- One shelf, four fluorescent lights; manual
- Three incandescent lamps
- Two interior electrical outlets
- Heating cable with temperature sensor
- Watertight removable plastic bottom
- Dual-function panel hygrometer/thermometer
- Chamber volume: 14.2 cu. ft.
- Made of rugged steel construction finished with white enamel inside and brown enamel outside
- Operates on 120VAC 800w
- Bulbs/lights are required but not included

### Single control panel features:

- Main power switch
- Lamp switch
- Thermostat
- 24-hour timer/programmer
- Switches for heater and fan

### ORDERING INFORMATION:

- Overall dimensions: 52 x 18.5 x 38 in. (132 x 47 x 97cm)
- Interior dimensions: 50 x 17 x 29 in. (127 x 43 x 74cm)
- Shipping weight: 107kg

Cat. No.	Description	Price
S53096MF	Growth Chamber	7730.00/Ea

## GrowLab™ II Mobile Indoor Garden

A full-size, movable GrowLab.

These complete, programmable, indoor growing units allow you more freedom. Developed by the National Gardening Association.

- Top shelf is used for growing and the bottom for supply storage
- Sturdy, easy-to-assemble frame is constructed of 1 in. (2.5cm) square aluminum
- Lightweight, 48 in. (123cm) fluorescent fixtures on easy-to-adjust slide rods
- 40w Sylvania™ Gro-Lux™ wide-spectrum bulbs for optimum plant growth
- Removable plant trays constructed of rigid heavy-duty plastic
- 24-hour programmable timers to control “day” length
- Plastic moisture grids provide water for plants on weekends
- Humidity tent provides a moist and warm growing environment

### ORDERING INFORMATION:

Frame dimensions: 54 × 23 × 74 in.  
(135 × 57.5 × 185cm)

### INCLUDES:

- Two light fixtures
- Four 40w Gro-Lux wide spectrum bulbs
- Eight plastic trays
- Four moisture grids
- Four locking casters
- 24-hour timer
- Climate control tent
- Power strip
- 128-page teacher’s manual, “GrowLab: A Complete Guide to Gardening in the Classroom”



Cat. No.	Description	Price
S28282	GrowLab™ II Mobile Indoor Garden	705.00/Ea

## Launch Your School's Biotech Program

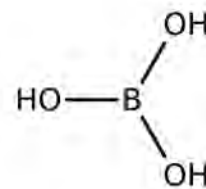
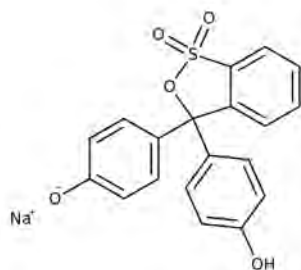
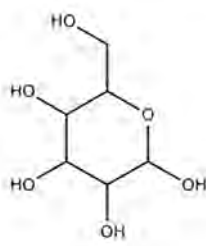
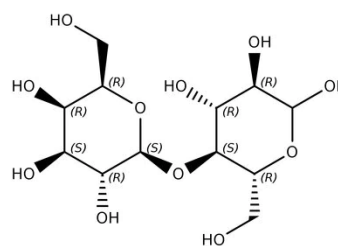
Find the curriculum, products, and support you need for every step of your journey.

Visit [fishersci.com/biotechresources](https://fishersci.com/biotechresources) to learn more.

**fisher science education**  
part of Thermo Fisher Scientific

# Top Chemicals for Biology and Biotechnology

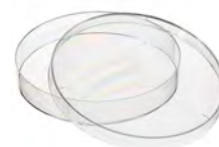
Use this curated list of products to restock your Biology and Biotechnology classroom, and visit [fisheredu.com](http://fisheredu.com) to find even more science education products.



Description	Quantity	Cat. No.	Price
Fisher Science Education™ Ethyl Alcohol, 95% Denatured with MIBK	500 mL	S25310	\$10.75
Fisher Science Education Bromothymol Blue, 0.04%	100 mL	S25207A	\$5.45
Fisher Science Education Calcium Nitrate, Reagent Grade	100 g	S25226	\$9.95
Fisher Science Education Copper (II) Sulfate	500 g	S25288A	\$13.00
Fisher Science Education Crystal Violet, 1%	100 mL	S25275	\$17.75
Fisher Science Education Dextrose, Anhydrous	100 g	S25295	\$7.60
Fisher Science Education D-Fructose	100 g	S25332	\$21.75
Fisher Science Education D-Galactose	100 g	S25334	\$44.00
Fisher Science Education Iodine, Gram Stain	100 mL	S25942	\$43.00
Fisher Science Education Hydrochloric Acid	3 mL	S25355	\$1.75
Fisher Science Education Lactose, Monohydrate	100 g	S25375	\$8.45
Fisher Science Education Methylene Blue, 1%	100 mL	S25431	\$5.50
Fisher Science Education Petroleum Ether	100 mL	S25461	\$10.00
Fisher Science Education Phenol Red, 0.02% w/v	100 mL	S25464	\$2.40
Fisher Science Education Sodium Carbonate, Anhydrous	100 g	S25539	\$2.95
Fisher Science Education Sodium Phosphate, 0.1 M	500 mL	S25889	\$11.25
Fisher Science Education Tris Borate EDTA	500 mL	S25616	\$11.25

# Need help choosing microbiology supplies?

Use this curated list of products to restock your microbiology classroom, and visit [fisheredu.com](https://www.fisheredu.com) to find even more science education products.



Description	Quantity	Cat. No.
<b>Prepared and Powdered Media</b>		
Prepared Culture Media in Plates	10/Pk	S716931A
Fisher Science Education™ Nutrient Broth	500 g	S25759B
Innovating Science™ MacConkey Agar	200 mL	S29571
<b>Stains and Dyes</b>		
Fisher Science Education™ Gram Stain Kit	Each	S25344
Fisher Science Education Methylene Blue (Loeffler's)	500 mL	S25432
Fisher Science Education Crystal Violet, 0.5% Solution	500 mL	S25275B
<b>Slides and Cover Slips</b>		
Eisco™ Microscope Glass Slides, Plain	50/Pk	S13943
Eisco Frosted Microscope Glass Slides	144/Pk	S95933
Fisherbrand™ Disposable Cover Slips	100/Pk	S17525B
<b>Microscope Cleaning Supplies</b>		
Raylabcon Lens Paper	12/Pk	S47605
Fisher Science Education Lens Cleaning Solution	100 mL	S25438
<b>Glass and Plasticware</b>		
Kimble™ KIMAX™ Petri Dishes	12/Pk	S31472
PYREX™ Beaker Set, 50 mL, 100 mL, 250 mL, 600 mL, 1000 mL	5/Cs	S63266
Fisherbrand™ Petri Dishes with Clear Lid	500/Cs	S33580A
Kimble™ KIMAX™ Plastic Test Tubes	250/Pk	S32169
<b>Liquid Handling</b>		
Fisherbrand Polystyrene Disposable Standard Serological Pipets	50/Pk	S68228D
Bel-Art™ SP Scienceware™ Pipette Pump™ Pipetter	Each	S35821
Fisherbrand Disposable Soda Lime Glass Pipets	250/Pk	S67051
<b>PPE</b>		
Fisherbrand Powder-Free Nitrile Gloves	100/Pk	S79585M
Visorgogs™ Goggles	Each	S47619S
United Scientific™ Lab Coats	Each	S04778
<b>Cleaning Supplies</b>		
Fisher Science Education Isopropyl Alcohol	4 L	S25371A
Fisherbrand™ Sparkleen™ 1 Detergent	3.25 lb.	S701101
Kimberly-Clark Professional™ Scott™ and Kleenex™ Folded Paper Towels	2,400/Cs	06-666-32B
Eisco Nylon Test Tube Brush, 9 in.	Each	S13960
Glassware Drying Rack	Each	S47855
Fisherbrand Glass Disposal Boxes	6/Cs	S41263
Bel-Art™ SP Scienceware™ Bench-Top Biohazard Bag Holder	Each	S04788B
Decon™ IRADECON Bleach-Based Disinfectant	32 oz.	4355150
Bel-Art™ SP Scienceware™ Cleanware™ Bottle Brush	Each	S90135

Biology

Cell Biology

### 3B Scientific™ Animal Cell Model

Shows form and structure of a typical animal cell as viewed from an electron microscope.

- All important organelles are raised and displayed in color
- Dimensions: 8.25 x 4.33 x 12.25 in. (21 x 11 x 31cm)

**Displays:**

- Nucleus
- Mitochondrion
- Basal membrane
- Collagen fibers
- Golgi apparatus
- Microvilli
- Lysosome
- Smooth endoplasmic reticulum (ER)
- Rough endoplasmic reticulum (ER)



Cat. No.	Description	Price
S96170	Animal Cell Model	428.00/Ea

### Simple Cell 3-D Model Kits

Assemble and use 3-D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home



Cat. No.	Description	Price
S81462	Simple Bacterial Cell	37.50/Ea
S81453	Euglena	37.50/Ea
S81459	Paramecium	37.50/Ea

### Eisco™ Plant and Animal Cell Comparison Model

Set of two models to compare plant and animal cells.

- Enables teaching of plant and animal cell structures
- Numbered with English Key Card
- Mounted on stand
- Size: 24L x 17W x 18cm H (9.5 x 6.7 x 7 in.)



Cat. No.	Description	Price
S15637	Plant and Animal Cell Comparison Model	122.00/Ea

### 3-D Cell Biology Model Kits

Assemble and use 3-D models to visualize and investigate key science structures.



- Gain a critical understanding of complex structures and processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81443	Cell Membranes	32.75/Ea
S81444	Cell Nucleus	37.50/Ea
S81464	Stem Cells	37.50/Ea

### Cross Section Cell and Organ Models

Colorful foam model comes apart to create a cross section view for hands-on classroom demonstrations.

- Included activity guides provide activity ideas, facts and detailed information on the function of the structure being modeled
- Key structures are labeled on one half of the model with the other half left unlabeled for testing purposes

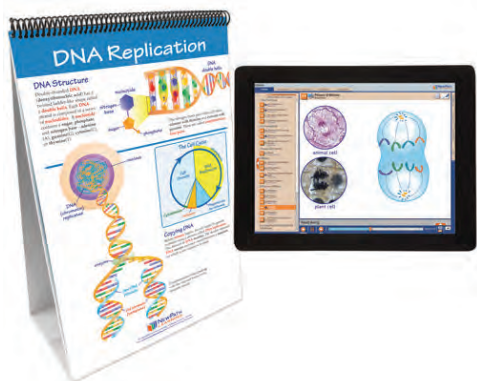


Cat. No.	Description	Price	Cat. No.	Description	Price
S90818	Human Heart Cross Section Model	22.00/Ea	S90816	Animal Cell Cross Section Model	24.00/Ea
S90819	Human Brain Cross Section Model	22.00/Ea	S90817	Plant Cell Cross Section Model	24.00/Ea

## Mitosis and Meiosis: Cell Growth & Division Flip Chart with Online Multimedia Lessons



Combine illuminating graphics and write-on/wipe-off exercises with multimedia lessons to master key life science topics.



- Provides graphical instruction and write-on/wipe-off activities with one-year online access to a corresponding Multimedia Lesson featuring in-depth, interactive coverage of the concept
- The Multimedia Lesson can be accessed by a teacher and ALL of your students anywhere, anytime, on any device – including Chromebooks, tablets, computers and mobile devices.
- Flip Chart Set features 10 Laminated, Double-Sided Charts
- Side 1 features a graphic overview of the topic while Side 2 provides corresponding write-on/wipe-off activities for review and reinforcement
- Includes a Teacher Guide with copymaster activities and review questions
- Spiral-bound and mounted on a sturdy easel for years of use, the Flip Chart sets are ideal for small group instruction, learning centers, independent use or classroom reference
- Also included is one year access to a corresponding online multimedia lesson for a teacher and all their students
- Each lesson features Animated, Narrated Tutorials; Interactive Exercises & Activities; Virtual Lab Investigations; Illustrated, Narrated Glossary; Visual Resource Library; and an Inquiry-Based Student Activity Guide
- Developed under sponsorship of the National Institutes of Health (NIH), the lessons are perfect for individual student instruction on any computer as well as classroom presentation on any Interactive Whiteboard

### Mitosis Model

- Comparing Plant & Animal Cells; Cell Cycle; Chromosomes; DNA Replication; Mitosis in Plant & Animal Cells; Comparing Mitosis & Cytokinesis; and Mitosis & Mutations

### Meiosis Model

- Sexual Reproduction; DNA Replication; Stages of Meiosis I & II; Crossing Over; and Comparing Mitosis & Meiosis

Cat. No.	Description	Price
S81103	Mitosis	50.00/Ea
S81106	Meiosis	50.00/Ea

## Mitosis & Meiosis 3-D Model Kit



Assemble and use 3-D models to visualize and investigate key science processes.

- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home



Cat. No.	Description	Price
S81457	Mitosis and Meiosis	37.50/Ea

## Eisco™ Animal Cell Division – Mitosis Model

Displays different stages in mitotic cell division.

- Set of 10 models
- Depicts resting cell, early prophase, late prophase, metaphase, anaphase, late anaphase, telophase and daughter cells
- Size: approx. 50L x 45W x 4cm H (19.6 x 17.7 x 1.5 in.)



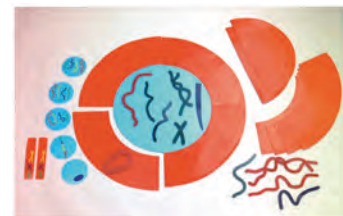
Cat. No.	Description	Price
S15641	Animal Cell Division Mitosis Model	165.00/Ea

## United Scientific™ Mitosis Manipulatives Kit

Instructive and reusable.

Manipulatives make it easier to teach an abstract concept like mitosis in a science classroom.

- Teacher demonstration model includes large pieces with magnets attached
- Five sets of smaller manipulatives for use by students working in groups
- Reusable



### INCLUDES:

- Printed manual and downloadable resources

Cat. No.	Description	Price
S90331	Mitosis Manipulatives Kit	456.00/Ea

## United Scientific™ Meiosis Manipulatives Kit

Makes the complex biological process of meiosis come alive in your classroom.

- Teacher demonstration models with 30 large chromosomes arranged in five colorful sets
- Each set consists of a maternal and paternal homolog and four sister chromatids
- Alleles and parental lineage are clearly identified
- The fifth set has removable alleles for demonstrating cross-over
- Student models consist of smaller sets of chromosomes
- Kit contents are reusable
- Dimensions: 21 x 19 x 5 in. (53.3 x 48.3 x 12.7cm)



### INCLUDES:

Downloadable resources and teacher manual with recommended student activity, assessment options and student activity sheets

Cat. No.	Description	Price
S05932	Meiosis Manipulatives Kit	424.00/Ea

## Lab-Aids™ Normal Mitosis Kit

Prepare a squashed stained slide of a root tip, observe cells undergoing mitosis and gain experience in microtechnique and staining.

Using this kit, students will be challenged as they identify the phases of plant mitosis, observe chromosomal development, gain hands-on experience with the micro-techniques, stain and mount their own slides.

Students prepare their own plant cells by treating scientifically grown onion root tips cells with a mild acid, then staining the cells.

A stained section of cells is then squashed onto a slide and smeared into a single layer for microscopic study. All of the activities in this kit can be completed in a standard lab period. Kit is for 30 students.



### INCLUDES:

- Root tips
- Plastic tissue-treating dishes
- Microscope slides and cover slips
- Four bottles of solution A (alcohol and hydrochloric acid)
- Four bottles of solution B (acetic acid, chloroform, alcohol)

- Tissue-macerating blades
- Four vials aceto-orcein stain
- Tissue transfer brushes
- Student worksheets and guides

**ORDERING INFORMATION:** Class size: 30 students.

**REQUIRES:** Microscope

Cat. No.	Description	Price
S19354	Normal Mitosis Kit	248.00/Ea

## AP LAB 7: Cell Division — Mitosis and Meiosis

Students identify and differentiate the various stages in mitosis and meiosis.

- Onion root tips are stained to identify the various stages and duration of mitosis
- Meiosis and Crossing Over in *Sordaria* is also demonstrated in this experiment
- Students will also have an opportunity to analyze mechanisms involved with the loss of cell cycle control in cancer

### INCLUDES:

Pipe cleaners (1.2 in. [3cm] long, in two colors), carbol-fuchsin (Ziehl-Neelson) stain, lectin (phytohemagglutinin PHA-M from *Phaseolus vulgaris*), plastic bags, slides and cover slips

### REQUIRES:

Colored pencils (two colors), microscope, 10 onion bulbs, jars with lids, two jars (one per treatment) for six students, sand, ethanol, glacial acetic acid (17.4M), hydrochloric acid, razor blades, forceps, scissors, scientific cleaning (Kimwipes™) wipes, coplin jars and disposable gloves



**ORDERING INFORMATION:**

- Class size: 10 lab groups
- Requires 60 minutes

Cat. No.	Description	Price
S06885	AP LAB 7: Cell Division — Mitosis and Meiosis	117.00/Ea

## Cells Flip Chart with Online Multimedia Lesson



Combine illuminating graphics and write-on/wipe-off exercises with multimedia lessons to master key life science topics.



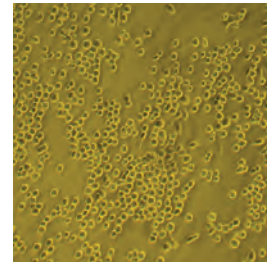
- Provides graphical instruction and write-on/wipe-off activities with one-year online access to a corresponding Multimedia Lesson featuring in-depth, interactive coverage of the concept
- The Multimedia Lesson can be accessed by a teacher and ALL of your students anywhere, anytime, on any device – including Chromebooks, tablets, computers and mobile devices.
- Flip Chart Set features 10 Laminated, Double-Sided Charts
- Side 1 features a graphic overview of the topic while Side 2 provides corresponding write-on/wipe-off activities for review and reinforcement
- Includes a Teacher Guide with copymaster activities and review questions
- Spiral-bound and mounted on a sturdy easel for years of use, the Flip Chart sets are ideal for small group instruction, learning centers, independent use or classroom reference
- Also included is one year access to a corresponding online multimedia lesson for a teacher and all their students
- Each lesson features Animated, Narrated Tutorials; Interactive Exercises & Activities; Virtual Lab Investigations; Illustrated, Narrated Glossary; Visual Resource Library; and an Inquiry-Based Student Activity Guide
- Developed under sponsorship of the National Institutes of Health (NIH), the lessons are perfect for individual student instruction on any computer as well as classroom presentation on any Interactive Whiteboard
- Covers: Discovering Cells; Animal & Plant Cell Organelles; Cell Energy; Photosynthesis; Comparing Plant & Animal Cells; Organization of Cells; Specialized Cells; and Single-Cell Organisms

Cat. No.	Description	Price
S81102	Cells Flip Chart with Online Multimedia Lesson	50.00/Ea

## Eucaryotic Cell Biology Experiment Kit

Familiarizes students with simple, robust cell culture system.

- Used in life science research, biotechnology laboratories
- Provides student with skill set desired in both academic research and industry
- Contains live materials



### Time requirements:

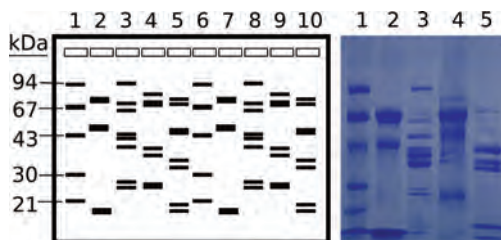
- Basic cell culture techniques - 30 minutes
- Examination of Insect Cell Cultures - 30 minutes
- Maintenance of Insect Cell Cultures - 1 hour
- Cell Viability using Trypan Blue - 30 minutes
- Differential staining using Giemsa stain - overnight

Cat. No.	Description	Price
S42877	Eucaryotic Cell Biology Experiment Kit	233.00/Ea

## Cell Types in the Brain Kit



The brain is an incredibly complex organ that uses a network of cells working together to function and perform everyday activities. This experiment helps students to examine the differences between cell types in the brain based on their profiles of proteins.



- Storage: Some components require freezer storage
- For 6 Groups Sharing 3 Polyacrylamide Gels

Cat. No.	Description	Price
S27561	Cell Types in the Brain Kit	79.00/Ea

Log in to your account on [fisheredu.com](https://www.fisheredu.com) to see your discounts.



## Morphology of Cancer Cells

This experiment allows students to see the differences between normal and cancer cells in both their growth and cell types.

Provide an understanding and visual comparison of the morphology of various normal and transformed mammalian cells by microscopic examination. Procedures similar to these are used to examine biopsy specimens.

### Morphology of Cancer Cells

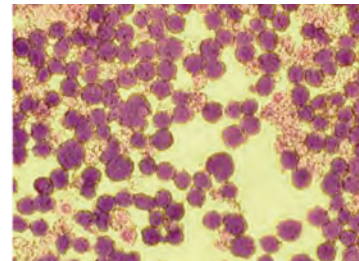
- Compares the contact inhibition of normal cells to the increased growth of cancer cell colonies

### INCLUDES:

- All necessary materials plus complete instructions, background information, and study questions.

### REQUIRES:

- Microscope with 400–600X magnification
- Forceps
- Gloves
- Distilled water



Cat. No.	Description	Price
S67199	Morphology of Cancer Cells	140.00/Ea

## Osmosis & Diffusion Flip Chart with Online Multimedia Lesson



Combine illuminating graphics and write-on/wipe-off exercises with multimedia lessons to master key life science topics.

- Provides graphical instruction and write-on/wipe-off activities with one-year online access to a corresponding Multimedia Lesson featuring in-depth, interactive coverage of the concept
- The Multimedia Lesson can be accessed by a teacher and ALL of your students anywhere, anytime, on any device – including Chromebooks, tablets, computers and mobile devices.
- Flip Chart Set features 10 Laminated, Double-Sided Charts
- Side 1 features a graphic overview of the topic while Side 2 provides corresponding write-on/wipe-off activities for review and reinforcement
- Includes a Teacher Guide with copymaster activities and review questions

- Spiral-bound and mounted on a sturdy easel for years of use, the Flip Chart sets are ideal for small group instruction, learning centers, independent use or classroom reference
- Also included is one year access to a corresponding online multimedia lesson for a teacher and all their students
- Each lesson features Animated, Narrated Tutorials; Interactive Exercises & Activities; Virtual Lab Investigations; Illustrated, Narrated Glossary; Visual Resource Library; and an Inquiry-Based Student Activity Guide
- Developed under sponsorship of the National Institutes of Health (NIH), the lessons are perfect for individual student instruction on any computer as well as classroom presentation on any Interactive Whiteboard



- Covers: Comparing Plant & Animal Cells; Cell Membrane and Cell Transport; Diffusion; Diffusion in the Lungs; Osmosis: The Diffusion of Water; Passive Transport; Active Transport; and Osmosis in Plant & Animal Cells

Cat. No.	Description	Price
S81104	Osmosis & Diffusion Flip Chart with Online Multimedia Lesson	50.00/Ea

## Lab-Aids™ Osmosis and Diffusion Kit

Observe diffusion through a membrane in two directions at the same time, observe selective permeability of a membrane and understand how osmosis and diffusion relate to cellular life processes on a cellular level.

This kit helps students observe first hand the characteristics of a differentially permeable membrane. Some substances will pass through the membrane and some won't. Some will actually pass through the membrane in both directions simultaneously. Simple color changes help students visualize this biological-physiological phenomenon. Kit is complete for 30 students.

### ORDERING INFORMATION:

Class size: 30 students.

### INCLUDES:

- 30 semi-permeable membranes
- Two bottles each of glucose solution and liquid starch
- 30 containers
- 60 glucose testing strips
- 30 individual worksheets and guides



Cat. No.	Description	Price
S19359	Osmosis & Diffusion Kit	152.00/Ea

## Osmosis & Diffusion 3-D Model Kit



Assemble and use 3-D models to visualize and investigate key science processes.

- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions



- Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81458	Osmosis and Diffusion 3-D Model Kit	37.50/Ea

## Fisher Science Education™ Gram Stain Kit

Bacteria stain set for Gram negative and positive results.



- Uses 1% Gentian violet solution, Gram's iodine solution, 95% ethanol (decolorizer), and 1% safranin solution
- Gram's iodine solution packaged in PVC bottle
- Maximum performance over 12-month shelf life ensured
- This product is an Educational Grade Chemical — no C of A is available

### INCLUDES:

- 4 x 250mL Bottles
- Three large-volume pipets
- Instructions

Cat. No.	Description	Price
S25344	Gram Stain Kit	34.25/Ea

## Eisco™ Polypropylene Petri Dishes with Covers

Eisco™ Polypropylene Petri Dishes with Covers are reusable and can be repeatedly autoclaved.



- Made from high quality polypropylene (PP)
- Includes dish and cover
- Reusable
- Autoclavable at 121°C

Cat. No.	Outside Diameter	Quantity	Price
S40602	50 mm	1	1.15/Ea
S29421	50 mm	12/Pk.	6.05/Ea
S40603	75 mm	1	1.05/Ea
S29422	75 mm	12/Pk.	9.20/Ea
S40604	100 mm	1	2.30/Ea
S29423	100 mm	12/Pk.	11.75/Ea
S40605	130 mm	1	2.30/Ea
S29425	150 mm	6/Pk.	20.75/Ea
S40606	150 mm	1	4.50/Ea

## fisherbrand Petri Dishes with Clear Lid

Feature a new and improved design and packaging.

- Made from medical-grade, gamma sterilized polystyrene
- Ventilation ribs on the lid allow for air circulation
- Manufactured in a state-of-the-art cleanroom facility
- Packaging features a UPS™ shippable outer carton to prevent damage
- Product sleeve is made from a strong polymer to prevent bag holes
- Dishes packed in easy-open product sleeve with tear notch
- Product sleeves are vacuum sealed to prevent scuffing and other damage to dishes
- Box of 500



Cat. No.	Description	Price
S33580A	Size: 100 X 15mm	146.00/Cs
S35839	Raised ridge; 60 x 15mm	256.00/Cs

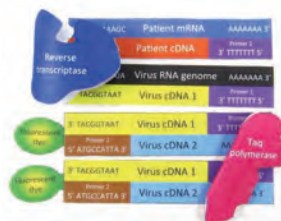
## Micro and Molecular Biology

## Coronavirus 3-D Model Kits

Assemble and use 3-D models to visualize and investigate key science processes.

- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81447	Coronavirus Antibody Test	37.50/Ea
S81467	Coronavirus COVID-19 Structure	37.50/Ea
S81468	Coronavirus DNA Test	37.50/Ea
S81448	Coronavirus Cycle	37.50/Ea



## Antibodies 3-D Model Kit

Assemble and use 3-D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home



Cat. No.	Description	Price
S81469	Antibodies 3-D Model Kit	37.50/Ea

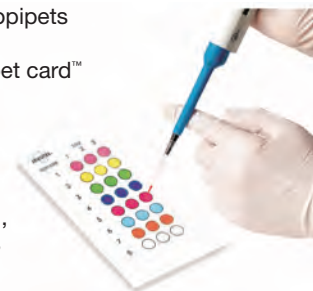
## Micropipetting Basics

Pipetting is a critical skill necessary for the accuracy that is essential in scientific experiments.

- Demonstrate the use of micropipets
- Prepare various dye mixtures and deliver mixture to the pipet card™
- Practice new skills by loading samples onto an agarose gel

### INCLUDES:

Colored dye samples, pipet card, instructions and study questions



Cat. No.	Description	Price
S68632	Micropipet Basics	67.00/Ea

## Pipetting By Numbers: STEAM Pipetting Practice Kit

Helps students master the fundamental biotechnology technique of micropipetting while creating a colorful, science-themed classroom poster with their own artwork

- Storage: Room Temperature
- Completion Time: 45 Minutes
- For 10 Lab Groups

Cat. No.	Description	Price
S27559	Pipetting By Numbers: STEAM Pipetting Practice Kit	72.00/Ea



**YOUR STEM PROGRAM**  
MAKE IT AMAZING!

[fisheredu.com/STEM](https://fisheredu.com/STEM): Your source for products, professional development, resources and everything STEM.

## Bacteria Culture Kit

Complete kit is ideal for middle and high school students.

### Kit includes:

- Three polystyrene Petri dishes, 100 x 15mm
- Nutrient Agar powder to create 120cc of Agar
- Plastic stir rod to aid in mixing, 6 in. (15.2cm)
- Instruction sheet for preparing Agar



**Note:** Cultures are not included.

Cat. No.	Description	Price
S01970	Bacteria Culture Kit	10.25/Ea

## Student Bacteria Experiment Kit

Allows groups of students to culture their own bacteria without an incubator.



Melt the media in a microwave, pour it into media plates and test for growth in four popular experiments.

### Experiments:

- Test-common use items such as bathroom handles, doorknobs and water fountains
- Clean hand/dirty hand test: How many bacteria does soap eliminate?
- Clean mouth/dirty mouth test: How many bacteria does mouthwash eliminate?
- Which mouth contains more bacteria: a human's or a dog's?

### ORDERING INFORMATION:

Class size: Four groups of five to six students.

### INCLUDES:

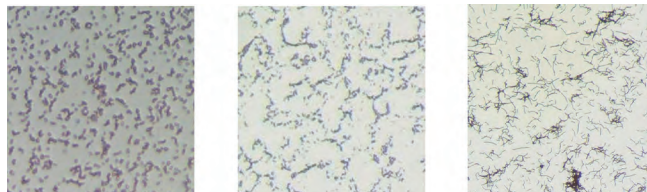
- Two 200mL bottles of prepared nutrient agar
- 20 radiation-sterilized Petri dishes
- 10 sterile swabs
- Four lab instruction sheets

Cat. No.	Description	Price
S68775	Bacteria Experiment Kit	51.00/Ea

## Identification and Characterization of Bacteria Kit



Gram staining is a quick, effective, and medically relevant identification test that is essential for bacterial classification. Students will use this staining technique to examine the size, shape, arrangement, and gram status (+/-) of *Escherichia coli*, *Bacillus subtilis*, and *Micrococcus luteus*.



- Storage: Some Components Require Refrigerator Storage Upon Receipt
- Completion Time: 90 minutes
- For 8 Groups

Cat. No.	Description	Price
S27555	Identification and Characterization of Bacteria Kit	99.00/Ea

## How Clean is Clean? Testing the Effectiveness of Antibacterial Cleaners Kit



Students will do two experiments to explore the properties of bacterial growth. They will determine a bacteria's ability to resist the antibiotic ampicillin, then test different household cleaners to determine which one is the most effective at preventing bacterial growth.



- Storage: Some Components Require Refrigerator Storage Upon Receipt
- Complete in 2 Lab Periods (24 Hours)
- For 10 Groups

Cat. No.	Description	Price
S27556	How Clean is Clean? Testing the Effectiveness of Antibacterial Cleaners Kit	89.00/Ea

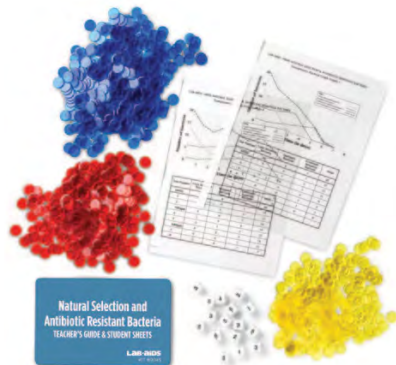


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## Lab-Aids™ Natural Selection and Antibiotic-Resistant Bacteria

In this activity, students model the effects of antibiotics on the population of disease-causing bacteria during an infection.



Why it is important to take an antibiotic as prescribed? Students model the effects of antibiotics on the population of disease-causing bacteria during an infection. During the simulation, some groups complete the full course of antibiotics, while others miss doses. They then graph populations of more-resistant and less-resistant bacteria. Students observe the selection of more-resistant bacteria that can take place if antibiotic treatment is intermittent or discontinued prematurely. Through this activity, student learn why it's important to take 'the full course' of antibiotics. Accommodates unlimited classes, each with 16 groups of 2 students. Includes Teacher guide, student sheets and assessment questions.

Cat. No.	Description	Price
S94501	Natural Selection and Antibiotic-Resistant Bacteria Kit	103.00/Ea

## Rainbow Transformation Kit

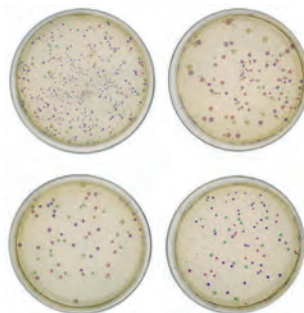
Allows for the selection, propagation, expression and purification of a gene.

Students transform bacteria with a new set of rainbow color plasmids that transform non-pathogenic bacterial cells into bright, colorful cells

- For 10 Lab Groups
- Set Up and Plating - 50 minutes
- Overnight incubation
- Transformation efficiency - 15 minutes

### INCLUDES:

Instructions, BactoBeads™, plasmid DNA, IPTG, ampicillin, transformation solution, ReadyPour™ Agar, Luria broth, petri dishes, sterile pipets, loops and microtubes



### REQUIRES:

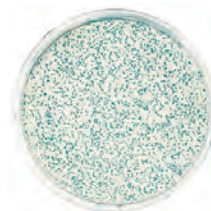
Waterbath, 37°C incubation oven, microwave or hot plate

Cat. No.	Description	Price
S21224	Rainbow Transformation Kit	157.00/Ea

## Transformation of *E. coli* with pGAL™ (Blue Colony)

Presence of IPTG is not required.

In this experiment, your students will develop an understanding of bacterial transformation by plasmid DNA by introducing an opportunity to observe an acquired phenotypic trait of the transformed bacterial cells. The presence of blue bacterial colonies visually demonstrates the expression of a specific gene for the Lac<sup>+</sup> phenotype.



### ORDERING INFORMATION:

Contains materials for 10 transformations.

### INCLUDES:

BactoBeads, plasmid DNA, buffers, reagents and antibiotic; ReadyPour™ Luria Broth agar; Luria Broth media for recovery; 40 Petri plates; 20 plastic microtipped transfer pipets; Three wrapped 10mL pipets and 25 wrapped 1mL pipets; 20 inoculating loops; 40 microtest tubes with attached lids; Complete instructions, background information and study questions

### REQUIRES:

Automatic micropipet (5 to 50µL) or 25µL fixed-volume micropipet and tips; Two water baths; Incubation oven; Pipet pumps or bulbs; Ice; Bunsen burner, hotplate or microwave oven; Hot gloves

Cat. No.	Description	Price
S11293	Transformation of <i>E. coli</i> (Blue)	157.00/Ea

## Transformation of *E. coli* with Green Fluorescent Protein (GFP)

GFP gene was isolated and cloned from the jellyfish *Aequorea victoria*.

In this experiment, students will explore the biological process of bacterial transformation using *E. coli* and plasmid DNA. At the end of the activity, students will have experience observing and analyzing acquired traits (ampicillin resistance and fluorescence) as exhibited by transformed bacterial cells.



### ORDERING INFORMATION:

Contains materials for 10 transformations and controls.

### INCLUDES:

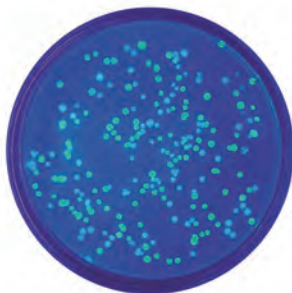
instructions, BactoBeads™ *E. coli* GFP Host, supercoiled pFluoroGreen™ plasmid DNA, ampicillin, IPTG, CaCl<sub>2</sub>, Growth Additive, ReadyPour™ Luria Broth Agar (sterile), Luria Broth Medium for Recovery (sterile), petri plates (small), petri plates (large), plastic microtipped transfer pipets, wrapped 10 ml pipet (sterile), toothpicks (sterile), inoculating loops (sterile), microcentrifuge tubes

Cat. No.	Description	Price
S68654	Transformation of <i>E. coli</i> (Green)	130.00/Ea

## Transformation of E. coli with Green and Blue Fluorescent Protein Plasmids Classroom Kit

Helps students develop an understanding of bacterial transformation by plasmid DNA

- Enables students to observe the acquired phenotypic trait of green or blue fluorescent protein exhibited by transformed bacterial cells
- Transformants acquire green (GFP) or blue (BFP) fluorescent protein genes contained in two different plasmids; the GFP gene was mutated to produce the blue protein
- Transformed cells are selected based on antibiotic resistance
- Colonies which express GFP or BFP protein are visibly green and pale blue and will fluoresce when exposed to long-wave UV light



### ORDERING INFORMATION:

Class size: 10 experiments. Shipped ambient. Supercoiled pFluoroGreen™, Supercoiled pFluoroBlue™, ampicillin, and IPTG require -20°C storage. Note: Transformation cell slant should not be frozen.

### INCLUDES:

- Instructions
- BactoBeads™
- Plasmid DNA
- IPTG
- Ampicillin
- Transformation solution
- ReadyPour™ agar
- Luria broth
- Petri dishes
- Sterile pipets and loops

### REQUIRES:

- Automatic micropipet (5-50µL) and tips
- 2 water baths (37°C and 42°C)
- Thermometer
- Incubation oven (34°C and 37°C)
- Pipet pumps or bulbs
- Ice
- Marking pens
- Bunsen burner, hot plate or microwave oven
- Hot gloves
- Long-wave UV light (EDVOTEK No. 969 recommended)

### ⚠ ALERTS:

Transformation experiments contain antibiotics which are used for the selection of transformed bacteria. Students who have allergies to antibiotics such as penicillin, ampicillin, kanamycin or tetracycline should not participate in this experiment. All components intended for educational research only. They are not to be used for diagnostic or drug purposes, nor administered to or consumed by humans or animals.

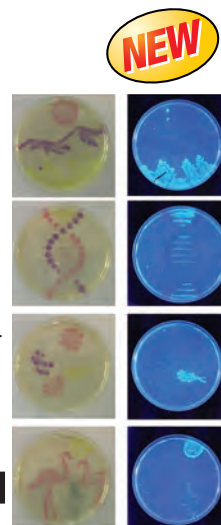
Cat. No.	Description	Price
S68653	Transformation of E. coli Kit (Green/Blue)	157.00/Ea

## Living Art: Adding STEAM to Transformations Kit

Students will harness the color producing power of transformed bacteria to create works of living microbial art. This kit is intended for use in conjunction with Transformation Kits 222, 223, 224 or 303.

- Some components require refrigerator and freezer storage upon receipt
- Time Required: 60 Minutes (plus two incubations)
- For 25 Students

Cat. No.	Description	Price
S27566	Adding STEAM to Transformations Kit	65.00/Ea



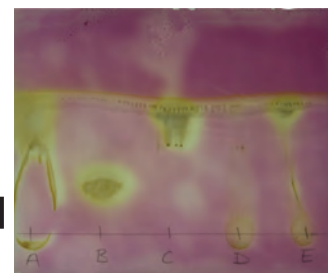
**NEW**

## Scents and Sense-ability Kit

Allows students to understand that olfactory receptors respond to smells and transmit them as signals to the brain. Furthermore, students will also be able to understand the principles of thin layer chromatography and how they apply to the separation of olfactory compounds.

- Storage: Room Temperature
- For 10 Lab Groups
- Undergraduate level

Cat. No.	Description	Price
S27560	Scents and Sense-ability Kit	95.00/Ea



**NEW**

## Microbiology Science Fair Kit

Enables students to grow their own bacteria by swabbing various surfaces in the classroom.

- Hands-on, easy-to-use kit for students
- Provides opportunity to investigate all phases of growing bacteria
- Includes: 2g of nutrient agar (makes 100mL 2% Agar), six Petri dishes and six sterile swabs



Cat. No.	Description	Price
S07805	Microbiology Science Fair Kit	17.25/Ea

**NEW**

## Inoculating Needles with Nichrome Wire

For dissection experiments.



- Nichrome Wire 24 gauge x 5cm
- Looped end in a 15cm glass handle

Cat. No.	Description	Price
S24571	Inoculating Needles with Nichrome Wire	2.90/Ea

## fisherbrand Nichrome/Aluminum Inoculating Loops

Fisherbrand Nichrome/Aluminum Inoculating Loops consist of a nichrome wire loop mounted to an aluminum handle. Inoculating loops are used to introduce microorganisms into a culture medium.



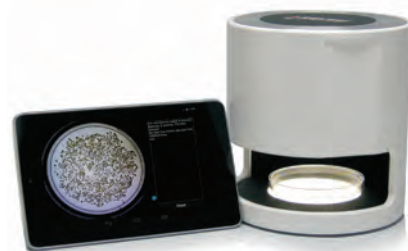
- Fisherbrand™ Nichrome/Aluminum Inoculating Loops are provided with a standard aluminum handle
- The aluminum handle is available in either an insulated or non-insulated format
- Inoculating loops are available in a variety of gauges, loop-hole sizes, and wire types to accommodate an array of laboratory requirements.
- Ideal for selecting, inoculating, or transferring microbiological samples
- Loops slide along agar surfaces without cutting or tearing material/sample
- Cools rapidly after sterilization
- Handle length: 8in.(203mm)
- Passivated
- Autoclavable up to 135°C; Can be sterilized by Eto/ gamma radiation
- Latex-free
- Produced under ISO 9002, GMP, cGMP guidelines
- 25 Gauge with 3-mm Loop (I.D.)
- Pack of 12

Cat. No.	Description	Price
S35887	Nichrome/Aluminum Inoculating Loops	95.00/Pk

## Automatic Colony Counter 150

Counts colonies/antibiotic reactions in a matter of seconds.

- Easy to use  
25.4cm (10 in.) android tablet
- Intuitive software
- Auto focus with override capabilities



### Specifications:

- CPU: Android based operating system
- Lights: High intensity LED (top and bottom)
- Petri dish capacity: Up to 100mm, including 3M Petri Film
- Camera: High quality HD digital camera, Carl Zeiss Optics
- Power requirements: 100-240 VAC 50/60Hz, 1.5Amp
- Compatible with FDA 21 CFR part 11, export as PDF
- Auto focus with override capabilities

**Note:** For Research use only. Not for any human therapeutic or diagnostic use.

### CERTIFICATIONS:

UL approved LED lights, power supply, and camera

Cat. No.	Description	Price
S20821	Automatic Colony Counter	4502.00/Ea

## Carolina™ 100 × 15mm Prepared Media Plates

An industry standard for nearly a century, this excellent prepared media supports a wide range of microorganisms

Each plate has an imprinted lot number and expiration date to ensure quality and viability for you and your students.

- Supports a broad spectrum of microorganisms
- Comes in a convenient 10-pack of sterile, ready-to-use plates



**Note:** C of A unavailable for this item

**INCLUDES:** Carolina™ Prepared Media booklet

⚠ Shipping Alert 1

Cat. No.	Description	Price
S21800ND	Nutrient Agar	24.75/Pk
S21807ND	MacConkey Agar	25.00/Pk
S21801ND	Tryptic Soy Agar	25.25/Pk
S42831	Eosin Methylene Blue Agar	27.75/Ea
S21802ND	Mannitol Salt Agar	28.25/Pk



**Shipping Alert 1:** Because this item is a living or perishable material a specified delivery date is required. Orders must be placed through Customer Service at 1-800-766-7000



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## Sterile Prepared Agar and Broth

High quality microbiological media at an economical price

- Sterile Prepared Agar and Broth will bring quality back to the lab market
- Case of 24

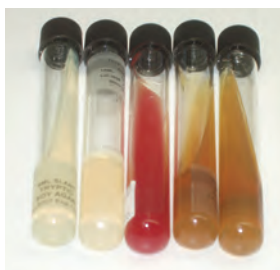


Cat. No.	Description	Volume	Case of	Price
S29564	Tryptic Soy Agar	125 mL	24	104.00/Ea
S29573	Nutrient Agar Tube - Slant	6 mL	100	148.00/Ea
S29575	Tryptic Soy Agar Tube - Slant	6 mL	100	147.00/Ea
S29562	Nutrient Agar	125 mL	24	79.00/Ea
S29561	Nutrient Agar	200 mL	24	99.00/Ea
S29572	MacConkey Agar	125 mL	24	104.00/Ea
S29571	MacCondey Agar	200 mL	24	106.00/Ea

## Prepared Culture Media in Tubes

Ready-to-use media prepared in disposable borosilicate glass tubes.

- Tubes measure 16mm O.D. x 125mm long and have black plastic screw caps
- Each tube is labeled with product name, expiration date and lot number
- Refrigerate until ready to use



### ORDERING INFORMATION:

Sold in pack of 20 tubes.

Cat. No.	Description	Price
S716932A	Nutrient Agar, Tube	98.00/Pk
S716942A	Nutrient Broth	104.00/Pk
S716992A	Tryptic Soy Broth	92.00/Pk
S716933A	Nutrient Agar, Slant	65.75/Pk



### BIOENGINEERING

IMPROVE STANDARDS OF LIVING

Find PCR, CRISPR, and other bioengineering products in our Life Sciences catalog.



### REMOTE LEARNING

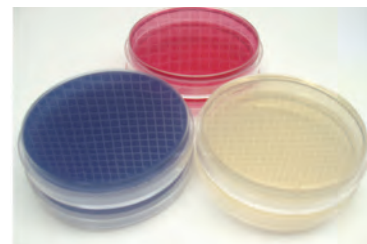
ENGAGE YOUR STUDENTS

Find tools and materials to keep your students engaged at [fisheredu.com/remotelearning](https://fisheredu.com/remotelearning).

## Prepared Culture Media in Plates

Labeled with product name, expiration date and lot number.

- Sterile plates are ready for immediate use
- Supplied in disposable plastic Petri dishes, 100mm O.D. x 15mm deep
- Packed in clear, heat-sealed cellophane bags
- Available in packs of 10

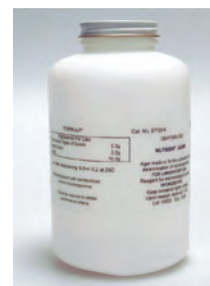


Cat. No.	Description	Price
S716961A	Potato Dextrose Agar Cell Culture Media	33.50/Pk
S716981A	Tryptic Soy Cell Culture Media	33.50/Pk
S716951A	Plate Count Agar Cell Culture Media	33.50/Pk
S716971A	Sabouraud Dextrose Agar Cell Culture Media	33.50/Pk
S716911A	Brain Heart Infusion Agar Cell Culture Media	15.50/Pk
S716931A	Nutrient Agar Cell Culture Media	33.00/Pk

## Dehydrated Culture Media and Ingredients

Essential agents for preparing culture media.

Successful bacteriological work begins with high-quality media. Agar, a solidifying agent, is an essential component of many media. So when you are planning your class projects, be sure to order ample supplies of agar, too.



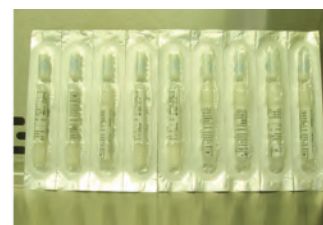
Cat. No.	Description	Quantity	Price
S71614A	Nutrient Agar	454g	136.00/Ea
S70210A	Agar	100g	28.75/Ea
S70213A	Agar	500g	144.00/Ea
S71613A	Nutrient Agar	113g	55.50/Ea
S71627A	Tryptic Soy Agar	454g	119.00/Ea
S71646A	Nutrient Agar 1.5%	454g	85.00/Ea
S71648A	Nutrient Broth	454g	140.00/Ea
S71666A	Sabouraud Dextrose Agar	454g	52.75/Ea
S71659A	Potato Dextrose Agar	454g	118.00/Ea

## Antibiotic Sensitivity Discs

Study antibiotic sensitivity and resistance.

- Vials are sealed for storage
- Designed to dispense one disc at a time, without contact or spoilage of remaining discs

**ORDERING INFORMATION:**  
Vials and bottles are supplied in packs of 50.



Cat. No.	Description	Price
S70150A	Antibiotic Sensitivity Discs	17.25/Pk



## Biochemistry

## 3B Scientific™ Biochemistry Molecular Model Kit

Compact/semi-space-filling models feature the “mushroom style” hydrogen atom-link part.

257 atom parts cover a wide range of biochemical structures including amino acids, monosaccharides, fatty acids, glycerol, steroids, purines, pyrimidines, peptides, disaccharides, nucleosides, nucleotides, coenzymes, proteins, polysaccharides and nucleic acids.

### INCLUDES:

- 68 carbon, black (42 tetrahedral, 24 trigonal, two linear)
- 34 nitrogen, blue (12 tetrahedral, 12 trigonal, 10 angular)
- 40 oxygen, red (20 angular, 10 linear, 10 one-hole)
- 10 hydrogen, white (linear)
- Two sulfur, yellow (angular)
- Six phosphorus, purple (tetrahedral)
- Two metal connectors, gray (one tetrahedral, one octahedral)
- 100 hydrogen links, white
- 150 NV-links, clear
- 10 V-links, gray
- Two link remover tools, cream



Cat. No.	Description	Price
S68292	Molecular Model Kit	124.00/Ea

## Lab-Aids™ Molecules of Life Kit

Build 3-dimensional models of carbohydrates, fats and protein, determine the molecular characteristics of carbohydrates, fats and protein, understand the structure and function of carbohydrates, fats and protein in relation to the chemical processes of the human body, compare molecular models to structural function and build a simple starch molecule by dehydration synthesis.

What are molecules of life? Science has proven that atoms unite into molecules, and that when molecules exchange atoms, new substances are created. Inorganic substances such as water, carbon dioxide, and oxygen, together with organic substances such as carbohydrates, lipids, and proteins, make the protoplasm found within the cells of living organisms. The molecules of life are the molecules that make protoplasm.

Students study the chemistry of carbohydrates, fats, and proteins. Durable, color-coded plastic atoms

are assembled, disassembled, and reassembled quickly and easily into 3-D molecules that provide highly graphic and extremely motivating learning experiences. Carbohydrates, lipids, and proteins can be completed as a series of lab activities, or as separate units. Each module can be systematically subdivided into smaller sections so students can do the work when most appropriate.

### INCLUDES:

- Worksheets
- 1800 color-coded plastic atoms



### ORDERING INFORMATION:

Class size: 30 students (15 teams).

Cat. No.	Description	Price
S19486	Molecules Of Life	170.00/Ea

## Kemtec™ Biochemistry Kits

Kemtec™ Biochemistry Kits provide teachers with the resources to develop course material, and experiments at varying complexities

### Biochemistry I:

- Introduce students to the chemistry of living things
- Features five classic biochemistry experiments
- Use Benedicts reagent, Biuret, Sudan IV, Iodine to test for proteins, carbohydrates, and lipids
- Use pepsin to digest protein
- Test the activity of salivary amylase (both in vitro and in vivo)
- Develop a technique for determining ascorbic acid concentration to use to evaluate Vitamin C levels
- Determine of the alkalinity of acidity of foods

• Ideal for students in biology, general science, nutritional science, or biochemistry

### Biochemistry II:

- Includes an entire course worth of classic biochemistry experiments presented at a more in-depth level than Biochemistry I
- Learn how to measure the pH of foods, saliva, and soil
- Learn classic detection methods for sugars, starch, fat, and protein
- Pepsin digestion of protein
- Amino acid detection using ninhydrin
- Explore the effects of varying conditions on salivary amylase activity



- Model how digestion works
- Determine ascorbic acid concentration
- Explore dyes and plant pigments using chromatography with different solvents
- Ideal for supporting higher level biology, nutritional science, advanced general science, or biochemistry courses

Cat. No.	Description	Price
S30816	Biochemistry I	257.00/Ea
S30817	Biochemistry II	311.00/Ea

## Small Group Learning: Chromatography Of Amino Acids

In this activity, students will perform a paper chromatography experiment on three known amino acids, and then use their results to identify the components of an unknown amino acid mixture.

Amino acids are the fundamental building blocks of all proteins. Often times scientists need to identify the amino acid contained in a protein. One such method for separating and identifying individual amino acids is paper chromatography.

- Kit contains enough material for 5 groups
- Teacher's Manual and Student Study Guide copymasters are included
- Aligned to the Next Generation Science Standards (NGSS)
- Disciplinary Core Ideas: PS1A; PS1B
- Performance Expectations: MS-PS1-2; HS-PS1-3
- Cross Cutting Concepts: Patterns
- Engineering Practices: Planning and Carrying Out Investigations; Analyzing and Interpreting Data; Scientific Knowledge is Based on Empirical Evidence



### ⚠️ ALERTS:

**WARNING:** This product can expose you to chemicals including Methanol/Methyl isobutyl ketone, which is known to the State of California to cause cancer, birth defects and reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### DISCLAIMERS:

Next Generation Science Standards is a registered trademark of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards was involved in the production of, and does not endorse, this product.

Cat. No.	Description	Price
S40730	Small Group Learning: Chromatography Of Amino Acids	20.25/Ea

## Enzymes 3-D Model Kit

Assemble and use 3-D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home



Cat. No.	Description	Price
S81452	Enzymes 3-D Model Kit	37.50/Ea

## Enzymes and the Process of Digestion

Understanding the vital role that enzymes play in the process of human digestive

- All the food in the world is of no use if the human body does not have the ability to extract necessary nutrients from it
- With this activity, students expose three nutrients (carbohydrates, proteins and lipids) to different digestive enzymes
- These samples tested against nutrients to which no enzymes are added to determine if the enzymes were effective in digesting the compounds
- Upon completion, students understand the importance of the digestive system and the vital role enzymes play in releasing nutrients from food and converting them to a form usable by the body
- Contains enough materials for 15 groups.

### Kit Includes:

- Pancreatin (Powder, 5 g)
- Bile Salts (Powder, 0.25 g)
- Albumin Egg (Powder, 2.5 g)
- Soluble Starch (2.5 g)
- Pepsin 1:10,000 (1 g)
- Amylase Bacteriological Powder (25 g)
- 0.1M Sodium hydroxide (25 mL)
- 0.1M Hydrochloric acid (25 mL)
- Biuret for protein test (25 mL)
- 1% Phenolphthalein (25 mL)
- Dilute Lugol's solution (25 mL)
- Pure Olive Oil (25 mL)
- 10 Plastic Pipets

### COMPLIANCE:

DOT: Small quantity exemption 173.3.  
Package conforms to 49CFR 173.4.



### ⚠️ ALERTS:

**WARNING:** This product can expose you to chemicals including Phenolphthalein, which is known to the State of California to cause cancer.

Cat. No.	Description	Price
S05800*	Enzymes and the Process of Digestion	77.00/Ea

## Kemtec™ Advanced Enzymology Kit

Introduces students to wide variety of enzyme kinetics and provides complete mini course in Enzymology.



Students use a spectrophotometer to study aspects of enzyme kinetics. They determine the reaction rate of Invertase when subjected to varied substrate concentrations, competitive and non-competitive inhibitors, changes in pH and changes in temperature.

- Reducing sugars are measured with chemical DNS which creates distinctive color change
- Grades 11-14
- Class size: 24 students
- Includes all necessary chemicals and reply card for Invertase enzyme and glucose solutions to be shipped separately upon request
- Reply card items are only shipped within continental United States

### INCLUDES:

Buffer pH 3 solution, buffer pH 4 solution, buffer pH 5 solution, buffer pH 6 solution, buffer pH 7 solution, buffer pH 8 solution, buffer pH 9 solution, buffer pH 10 solution, buffer substrate effects solution, buffer temperature effects solution, buffer inhibition solution, inhibitor solution, sucrose inhibitor, sucrose substrate effects, sucrose temperature effects, sucrose pH substrate, 3,5 di-nitro salicylic solution (DNS), aniline solution, reply card for invertase enzyme and glucose solution, instructor manual, student data sheets, MSDS

### REQUIRES:

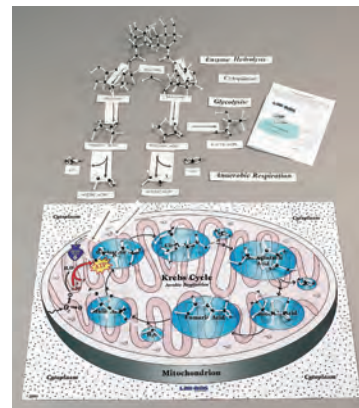
Goggles, lab glassware including beakers, test tubes and graduated cylinders, hot plate, spectrophotometer

Cat. No.	Description	Price
S06758	Advanced Enzymology Kit	325.00/Ea

## Lab-Aids™ Molecules of Metabolism Kit: Understanding Digestion and Respiration

Learn how to construct molecules involved in these processes necessary for life.

Student will be able to see and appreciate how large molecules are converted to smaller molecules that the body can use. Cellular respiration is addressed by illustration how Adenosine Triphosphate (ATP) the energy molecule of life is formed by the systemic release of potential energy trapped in the chemical bonds in food molecules. The major molecules of the Krebs' Cycle (aerobic respiration) are also illustrated in this kit.



### Kit Includes:

- 1 Teacher's Guide with MSDS
- 30 Student Worksheets and Guides
- 1 Set of model pieces containing: 123 white Hydrogen atoms, 69 black Carbon atoms, 72 blue double bond Oxygen atoms, 263 bonds (white tubes)
- 1 Set of labels and arrows
- 1 Mitochondrion poster

### INCLUDES:

- 120 hydrogen atoms (white)
- 60 carbon atoms (black)
- 60 oxygen atoms, double bond (blue)
- 220 bonds (white tubes)
- Set of labels and arrows
- Mitochondrion poster
- 30 student worksheets and guides
- Instruction manual

Cat. No.	Description	Price
S90185	Molecules of Metabolism Kit	88.00/Ea
S90185A	Molecules of Metabolism Expansion Kit for Additional Group of 4 Students	58.75/Ea



# MyPlate Food and Nutrition Curriculum Sets

Master key concepts of food, nutrition, and a healthy lifestyle.




## Flip Chart Sets (S81094, S81085)

- The colorfully illustrated pages provide students with an engaging means to understand the food groups and the importance of making healthy lifestyle choices
- Each page 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
- Includes a Student Activity Guide with copy-masters of charts and review questions
- 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, Nutrition Facts Labels, Making Healthy Choices

## Bulletin Board Chart Sets (S81099, S81091)

- Each of the charts is laminated and double-sided
- One side features a graphic overview of the concept and easy-to-follow, illustrated explanations
- The reverse side includes write-on/wipe-off activities for student review and reinforcement
- 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

## Student Learning Guides (S81100, S81092, S81101, S81093)

Includes grade-appropriate self-directed readings, easy-to-follow illustrated explanations, pause and review questions, interactive activities, key vocabulary review and assessment questions

- Covers food, nutrients, food groups, understanding nutrition facts labels, and making healthy choices

## Visual Learning Guides Collection Sets (S81098, S81090)

Collection consists of 10 laminated, write-on/wipe-off Guides

- Each guide covers a different topic and includes 4 panels featuring an illustrated overview of the concept, labeling and review exercises, vocabulary activities, and assessment and review questions
- Includes Teacher Guide with instructions for successful classroom integration
- Comprehensive coverage of: Food Nutrients, Choose MyPlate, Fruits Food Group, Vegetables Food Group, Protein Food Group, Grains Food Group, Dairy Food Group, Oils and Fat, Healthy Snacking, Making Healthy Choices

## MyPlate Learning Centers (S81096, S81087)

Designed for either teacher-directed instruction or independent use by groups of up to 4 students

- 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
- Guiding, assessment review questions
- A 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
- Ideal for use in the classroom, after-school programs, or even at home
- Provides materials for up to 4 students, takes only minutes to set up
- Stores in the zippered pouch provided for years of use

Cat. No.	Description	Price
<b>Flip Chart Sets</b>		
S81094	Food Groups Flip Chart Set; Grades 3 to 5	50.00/Ea
S81085	Food Groups Flip Chart; Grades 6 to 10	50.00/Ea
<b>Bulletin Board Chart Sets</b>		
S81099	Food & Nutrition Bulletin Board Chart Set of 8; Grades 3 to 5	34.25/Ea
S81091	Food & Nutrition Bulletin Board Chart Set of 8; Grades 6 to 10	34.25/Ea
<b>Student Learning Guides</b>		
S81100	Food & Nutrition Student Learning Guide; Grades 3 to 5	16.50/Ea
S81092	Food & Nutrition Student Learning Guide; Grades 6 to 10	16.50/Ea
S81101	Food & Nutrition Student Learning Guide Set of 10; Grades 3 to 5	125.00/Ea
S81093	Food & Nutrition Student Learning Guide Set of 10; Grades 6 to 10	125.00/Ea
<b>Visual Learning Guides</b>		
S81098	Food & Nutrition Visual Learning Guides Collection Set of 10; Grades 3 to 5	62.50/Ea
S81090	Food & Nutrition Visual Learning Guides Collection Set of 10; Grades 6 to 10	62.50/Ea
<b>MyPlate Learning Centers</b>		
S81096	Choose MyPlate Learning Center; Grades 3 to 5	34.25/Ea
S81087	Learning Center; Grades 6 to 10	34.25/Ea

## Food Nutrients Learning Centers

Master key concepts of food, nutrition, and a healthy lifestyle.

- Designed for either teacher-directed instruction or independent use by groups of up to 4 students
- Ideal for use in the classroom, after-school programs, or even at home
- The Learning Center covers Food Nutrients
- 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
- Guiding, assessment review questions
- Stores in the zippered pouch provided for years of use
- A 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
- Provides materials for up to 4 students, takes only minutes to set up



Cat. No.	Description	Price
S81097	Making Healthy Choices Learning Center; Grades 3 to 5	34.25/Ea
S81089	Making Healthy Choices Learning Center; Grades 6 to 10	34.25/Ea
S81095	Food Nutrients Learning Center; Grades 3 to 5	34.25/Ea
S81086	Food Nutrients Learning Center; Grades 6 to 10	34.25/Ea
S81088	Understanding Nutrition Facts Learning Center; Grades 6 to 10	34.25/Ea

## Lab-Aids™ Food Nutrient Analysis Kit

Test common foods for presence of nutrients, quantitatively determine Vitamin C in foods and standardize all tests.

Working in teams, students are asked to test for, and identify, five classes of nutrients: sugar, starch, lipid, protein, and Vitamin C. Once the tests have been completed and their observations have been made, students are then asked to draw conclusions about their results, the controls, and samples that showed no reaction. It is necessary to have a hot water bath available for the test of simple sugars. Includes Teacher guide, student sheets, assessment questions and SDS.

### INCLUDES:

- 30 test tubes
- Dropper-controlled bottles of sugar, starch, lipid, protein and vitamin C solutions
- All necessary reagents
- Wax pencil
- 30 student worksheets
- Instruction manual with Material Safety Data Sheets

### REQUIRES:

Hot water bath (for test of simple sugars)

**⚠ Perishable contents. Limited shelf life.**



Cat. No.	Description	Price
S19340	Food Nutrient Analysis	154.00/Ea

## Small Group Learning: Science In The Kitchen

This comprehensive kit incorporates a variety of scientific techniques all themed around common kitchen materials.

### Students will:

- Perform chromatography on commercial food colors
- Perform chemical tests to identify an unknown cooking ingredient
- Examine the protein digesting ability of a common meat tenderizing enzyme
- Use titration to quantify vitamin C levels
- Test an unknown juice or soda (not provided)
- Examine some of the differences and similarities in the materials used to clean (soap, hand dishwashing detergent, and machine dishwashing detergent)
- Kit contains enough materials for 5 groups
- Teacher's Manual and Student Study Guide copymasters are included
- Aligned to the Next Generation Science Standards (NGSS)
- Disciplinary Core Ideas: PS1.A; PS1.B
- Performance Expectations: MS-PS1-2; MS-PS1-3; HS-PS1-3
- Cross Cutting Concepts: Patterns; Structure and Function
- Engineering Practices: Analyzing and Interpreting Data; Obtaining, Evaluating and Communicating Information; Planning and Carrying Out Investigations
- Size: 11.75 x 9 x 4 in. (L x W x H)



### DISCLAIMERS:

Next Generation Science Standards is a registered trademark of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards was involved in the production of, and does not endorse, this product.

Cat. No.	Description	Price
S40755	Small Group Learning: Science In The Kitchen	78.00/Ea

## Kemtec™ Kitchen Science Kit

Kemtec™ Kitchen Science Kit explores yeast as a living organism through chemical and biological leavening

- The kitchen is a fantastic, yet familiar setting for exploring physical and chemical properties
- Learn chemistry and biology using common baking ingredients
- Explore how different preparation methods using the same ingredients affect the textures and flavors of foods
- Includes five experiments
- Explore the properties of yeast through experiments and class demonstrations
- Compare internal structures and textures of baked goods
- Includes worksheets, assessment materials, graphing exercises, simple recipes, and answer keys.
- Grades 7-10



Cat. No.	Description	Price
S30818	Kitchen Science Kit	286.00/Ea

## Lab-Aids™ Food Analysis, Limited Shelf Life

Identify major nutrients in common foods, test common foods for presence of nutrients and quantitatively determine Vitamin C in foods.

Using simple and safe chemical tests, students can very quickly and easily identify the major nutrients in common foods. Students use step-by-step instructions to test common foods for the presence of carbohydrates, proteins, lipids. They also perform qualitative (detect a presence) and quantitative (how much) tests of Vitamin C by using a very simple drop-by-drop titration process. Over 100 tests for unknowns can be performed on each food group. This kit does not use corrosive agents or toxic substances.



### INCLUDES:

1 teacher's guide with MSDS; 10 student worksheets and guides; 2 plastic droppers; 20 slides; 10 test tubes; 1 drop control bottle of Fat Testing solution; 1 drop control bottle each of: Protein Testing solution Type A, Protein Testing solution Type B, Starch Testing solution, Sugar Testing solution, Vitamin C Standardizing solution, and Vitamin C Testing solution

**⚠ NOTE: Because of limited shelf-life of certain components, the Food Analysis Kit should be used within three weeks of receipt.**

### ORDERING INFORMATION:

Number of students: 10 to 40 Number of groups:  
Maximum of 10 groups

Cat. No.	Description	Price
S20665	Food Analysis Kit	108.00/Ea

## Eisco™ Food Calorimeter

Allows students to determine the amount of energy released through the burning of food. Eisco™ Food Calorimeter is an easy method involves the measuring of the change in temperature of a sample of water from the combustion of a small amount of food.

- Experiment introduces concepts in thermodynamics and leads to an understanding of energy and its relation to food consumption
- Experiment Guide included with product

### Kit contains:

- Erlenmeyer Flask (125mL)
- Cylindrical Metal Stand: Dia x H: 4 x 6.75 in.
- Metal suspension plate 4.5 x 4.5 in.
- Cork with nail (Food sample Holding assembly)
- Rubber stopper



Cat. No.	Description	Price
S23759	Food Calorimeter	30.75/Ea

## Advanced Placement

## AP Biology Investigation Kit No. 1: Artificial Selection

To study the process of artificial selection by using fast growing plants.

- Students will identify phenotypic differences to observe
- Selective cross pollination is used to examine prevalence of particular phenotype in successive generations
- Meets AP Science Practices 2, 5, 7 and Big Idea 1
- Materials provided for 32 students in eight lab groups

### INCLUDES:

- One bag potting soil
- One bag vermiculite
- One package 7 oz. cups
- One package 5 oz. cups
- Eight magnifiers
- One nutrient quick solution to make 1L
- One package Innovating Science Fast Growing Plant Seeds
- One package cotton swabs
- One package hydroponic wicks



Cat. No.	Description	Price
S07063	AP Biology Investigation Kit No. 1: Artificial Selection	84.00/Ea

## AP Biology Investigation Kit No. 12: Fruit Fly Behavior

Learn about Fruit Fly behavior

- Students will study whether fruit flies will move toward or away from important chemicals and food that aid in their survival
- Using the choice behavior chamber, behaviors of the fruit-flies are observed and any pattern can be identified
- Students will formulate their own theories based on the fruit flies' response to the chemicals and foods
- Then, they can determine what materials and experiments should be tested further
- Meets AP Science Practices 1, 3, 4, 5, 6, and 7, and Big Idea 4
- Materials provided for eight lab groups

### Kit Includes:

- Ethyl Alcohol (30 mL)
- Deionized Water (30 mL)
- 5% Ammonia (30 mL)
- Vinegar (30 mL)
- Fruit fly vials
- Innovating Science®; Behavior Choice Chambers (8)
- Coupon for perishable materials (8 fruit fly cultures)

### REQUIRES:

Food items such as yeast, peanut butter, ketchup, jelly, salad dressing, apples, bananas and capers



**⚠️ ALERTS:**  
**WARNING: This product can expose you to chemicals including Methanol/ Methyl Isobutyl Ketone, which is known to the State of California to cause cancer and reproductive harm.**

Cat. No.	Description	Price
S07060***	AP Lab 12: Fruit Fly Behavior	230.00/Ea

## AP Biology Investigation Kit No. 5: Photosynthesis

Students learn necessary components and conditions for photosynthesis using leaf disks to measure oxygen accumulation and its affect on the process.

Students will design and conduct an experiment using a selected variable to examine the rate of photosynthesis.

- Meets AP Science Practices 1, 2, 3, 6 and 7, and Big Idea 2
- Includes enough materials for eight lab groups
- For grades 10-12

### INCLUDES:

- Dilute soap solution - 30mL
- Hole punch
- Plastic cups -16 count
- Sodium bicarbonate - 50g
- Syringes, 10mL - 16 count
- Teacher's manual and student study guide

### REQUIRES:

- Living plant leaves
- Timers or stop watches
- Light source
- Distille or deionized water



Cat. No.	Description	Price
S07045	AP Biology Investigation Kit No. 5: Photosynthesis	61.75/Ea



\* California - WARNING: Cancer [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*\* California - WARNING: Reproductive Harm [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*\*\* California - WARNING: Cancer and Reproductive Harm -[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## AP Biology Investigation Kit No. 4: Diffusion and Osmosis

Students study concepts in osmosis and diffusion process

- Movement of water and nutrients across cell membrane
- Investigate relationship between surface area and volume as it relates to cells and diffusion
- Examine the concept of molarity and its relation to osmotic potential and movement of water
- Cell size, shape and water elimination affect the overall rate of nutrient intake
- Students use plant tissue to determine molarities of unknown solutions based on direction and degree of water movement
- Meets AP Science Practices 2, 4, and 5, and Big Idea 2
- For 8 groups



### INCLUDES:

- Agar (45 g)
- Bromothymol blue concentrate (15 mL)
- 2M Hydrochloric Acid (2 x 25 mL)
- Sucrose Quick Solution (Makes 0.2M, 0.4M, 0.6M, 0.8M, 1M)
- Sodium Chloride Quick Solution
- Ovalbumin Quick Solution
- Glucose Quick Solution
- Distilled Water Solution

- Food coloring set
- Plastic cups
- 8 Agar block casting trays
- 40 pieces dialysis tubing
- 8 Plastic knives, stirrers
- 8 metric rulers
- Microscope slides, Coverslips
- Teacher manual
- Student study guide

### REQUIRES:

- Paper towels
- Distilled or deionized water
- Electronic balance
- Large onion
- Fine-point forceps/tweezers
- Microscopes
- Potatoes, sweet potatoes, or yams

Cat. No.	Description	Price
S07056*	AP Biology Investigation Kit No. 4: Diffusion and Osmosis	176.00/Ea

## Advanced Placement Laboratory Kit 1: Principles and Practice of Diffusion and Osmosis

Experiments help students develop an understanding of the molecular basis of diffusion and osmosis and its physiological importance.

- Analyze how solute size and concentration affect diffusion across semi-permeable membranes and how these processes affect water potential
- Calculate water potential of plant cells
- Class size: 40 students working in groups of 4

**Part A:** Dialysis experiments utilizing two dyes of different molecular weights visually demonstrate the size selectivity of membranes. Experiments also demonstrate changes in the equilibrium of the diffusible dye as it is removed from system.

**Part B:** Experiment approximates an osmotic system by demonstrating net flow of water through a dialysis membrane.

**Part C:** Involves the calculation of potato cell water potential from experimental data.

### ORDERING INFORMATION:

Class size: 40 students working in groups of 4.

### INCLUDES:

instructions, orange indicator dye, violet dye, sucrose, NaCl solution, powdered sucrose, dialysis tubing



### REQUIRES:

- 300 to 400mL Beakers† (20 for Part A, 50 for Part B, and 16 for Part C)
- 1, 5, and 10mL Pipets
- Graph paper
- Scales
- Distilled or deionized water
- 10 Thermometers
- Four potatoes
- Cork borers or small kitchen knives

Cat. No.	Description	Price
S11281	AP Lab Kit 1: Principles and Practice of Diffusion and Osmosis	140.00/Ea

†Beakers can be substituted with clear, disposable plastic cups.



\* California - WARNING: Cancer [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*\* California - WARNING: Reproductive Harm [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*\*\* California - WARNING: Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



## AP Biology Investigation Kit No. 6: Cellular Respiration

Students measure and record the rate of oxygen consumption (cellular respiration).

- Activity involves use of a respiration chamber
- Germinating seeds and non-germinating material are used as control samples
- Meets AP Science Practices 1, 2, 3, 6 and 7 and Big Idea 2
- This package conforms to 49 CFR 173.4 for domestic highway or rail transport only
- For eight lab groups

### REQUIRES:

- Eight graduated cylinders (100mL)
- Eight thermometers
- Eight stopwatches or digital timers
- Ice
- Wax marking pencils or markers
- Paper towels
- Masking tape

### Kit Includes:

- Pea Seeds (1 Pack)
- Plastic Beads (1 Pack)
- 15% Potassium Hydroxide (1 Bottle)
- Non-absorbent, absorbent cotton (1 Pack)
- Petroleum jelly sealant (1 Tube)
- 8 trays
- 48 washers
- 24 rubber stoppers
- 24 Respiration Chambers
- 24 Graduated Pipets
- Teacher's manual
- Student study guides



**⚠️ ALERTS:**  
**WARNING: This product can expose you to chemicals including Phthalates, which is known to the State of California to cause and reproductive harm.**

Cat. No.	Description	Price
S07057**	AP Biology Investigation Kit No. 6: Cellular Respiration	289.00/Ea

## AP LAB 6: Cellular Respiration

Students use small respirometers to determine O<sub>2</sub> consumption.

In this experiment, students learn how to apply the gas laws to the function of the microrespirometer. Students will observe cell respiration of germinating seeds and describe the effects of temperature on the rate of cell respiration.

### REQUIRES:

- 10 Thermometers
- 10 Trays (at least 14 in. [35.6cm] long)
- Silicon glue
- Ice
- Cork borer
- Tape and Timers

### INCLUDES:

- Instructions
- 1mL Pipet
- Glass beads
- Peas
- Potassium hydroxide solution
- Cork stoppers
- Absorbent cotton
- Nonabsorbent cotton
- Plastic vials
- Parafilm

### ORDERING INFORMATION:

- Class size: 10 lab groups
- Requires two hours over two lab periods



Cat. No.	Description	Price
S06884	AP LAB 6: Cellular Respiration	72.00/Ea

## AP Biology Investigation Kit No. 9: Restriction Enzyme Analysis

In this lab students will understand the action and specificity of restriction enzymes, while learning the components involved in the process of DNA electrophoresis and the role of each component as it applies to the entire process of electrophoresis.

Students will perform the electrophoresis process on DNA samples treated with different restriction enzymes and construct a standard curve using a known DNA sample while determining the approximate size of the DNA fragments in unknown samples.

Meets AP Science Practices 3 and 6, and Big Idea 3. Materials provided for eight lab groups.

### INCLUDES:

- Prepared agarose, 0.8%, 200mL TBE buffer, 5X, 500mL
- DNA Stain, 20X, 60mL DNA Samples, 100µL each:
- DNA Marker (Lambda DNA HindIII digest)
- Sample #1 (Lambda DNA)
- Sample #2 (Lambda DNA BstEII digest)
- Sample #3 (Lambda DNA EcoRI digest)
- Sample #4 (Lambda DNA BstEII digest)

### REQUIRES:

- Agarose electrophoresis chamber
- Microwave or hot water bath
- Electrophoresis power supply
- Distilled or deionized water
- Micropipettes w/micropipette tips, 10µL
- Gel staining trays or similar (large enough container to accommodate flat agarose gels)



Cat. No.	Description	Price
S07059	AP Lab 9: Restriction Enzyme Analysis	134.00/Ea

## AP Biology Investigation Kit No. 7: Cell Division: Mitosis and Meiosis

Students will study the cellular steps involved in DNA replication and cell division in both mitosis and meiosis.



- Stages of mitosis in the preparation of plant root tips
- Crossing over in meiosis via *Sordaria* cultures
- Meets AP Science Practices 1, 5, 6, and 7, and Big Idea 3
- Teacher's manual and student's guide included
- Materials for 32 students (8 groups of 4)

### Kit Includes:

- 6.0M Hydrochloric Acid (30 mL)
- 1% Toluidine blue (30 mL)
- Sand (500 g)
- *Sordaria* Agar (200 mL)
- *Sordaria* Mating Agar (200 mL)
- Slides, Coverslips (1 Pack Ea.)
- 8 forceps
- 16 Plastic pipettes
- 20 Petri dishes (sterile)
- 8 Inoculating loops (sterile, disposable)
- 7 oz. cups (8)
- 10 Disposable scalpels
- Coupon for perishable materials

### ⚠ ALERTS:

**WARNING: This product can expose you to chemicals including Respirable Crystalline Silica, which are known to the State of California to cause cancer.**

Cat. No.	Description	Price
S07062*	Mitosis and Meiosis Kit	225.00/Ea



\* California - WARNING: Cancer [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*\* California - WARNING: Reproductive Harm [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*\*\* California - WARNING: Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## AP Biology Investigation Kit No. 8: Bacterial Transformation

Students genetically engineer bacteria through transformation with a plasmid that confers antibiotic resistance.



- Efficiency of the procedure is determined by examining the number of resistant bacteria
- Includes teachers manual and student study guide copymasters
- Meets AP Science Practices 1, 3, 5, 6, and 7, and Big Idea 3
- For eight lab groups

Recommended: Incubator (37°C). Requires: Large beaker, microwave (not necessary if melting agar in a waterbath), microfuge tube racks, hot plate or waterbath, markers, and container of ice.

### INCLUDES:

- Sterile Calcium Chloride 0.05M (30mL)
- 16 Sterile volumetric pipets
- Eight Pipet bulbs
- Eight micropipets w/ plunger (10µL)
- 16 Microcentrifuge Tubes (1.5mL)
- Eight sterile inoculating loops
- 40 Petri dishes
- Four Luria agar (200mL)
- One Luria broth tube (9mL)

Perishable materials are supplied via coupon redeemable by fax, phone or e-mail, and include:

- One E. Coli culture (freeze dried)
- Two bottles 0.02g Ampicillin
- 1000ng pUC 19 Plasmid
- One Tryptic Soy Broth tube (9mL)
- One Tryptic Soy Agar slant (6mL)
- One sterile, disposable pipet

Cat. No.	Description	Price
S07058	AP Biology Investigation Kit No. 8: Bacterial Transformation	225.00/Ea

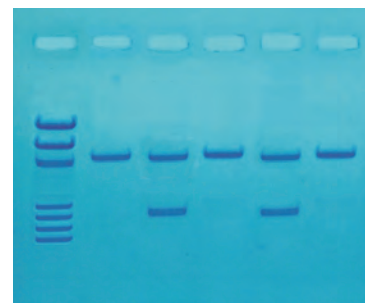
## Detection of the Influenza Virus Experiment Kit

In this experiment, students perform two common tests (RIDT, RT-PCR) used to diagnose the flu in clinical setting. Edvotek™ Detection of the Influenza Virus Experiment Kit is for 8 lab groups.

Complete in 90 minutes

### REQUIRES:

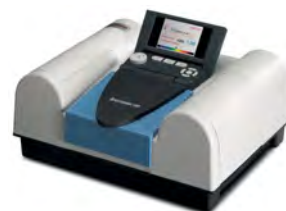
Horizontal gel electrophoresis apparatus, D.C. power supply, automatic micro pipettes and tips, balance, microwave or hot plate, pipette pump, 250 ml flasks or beakers, hot gloves, safety goggles and gloves, small plastic trays or large weigh boats, DNA visualization system (white light), distilled or deionized water



Cat. No.	Description	Price
S29012	Detection of the Influenza Virus Experiment Kit	141.00/Ea

# Need help choosing supplies?

Use this curated list of products to restock your biotechnology classroom, and visit [fisheredu.com](http://fisheredu.com) to find even more science education products.



Description	Quantity	Cat. No.
<b>Solutions and Reagents</b>		
Fisher Science Education™ Hydrochloric Acid, ACS, 12M	2.5 L	S25838
Fisher Science Education Hydrogen Peroxide, 30% Solution	500 mL	S25360
Innovating Science™ Blood Typing Anti-Sera	Each	S06626
Edvotek™ PCR-Based DNA Typing	Each	S66823
Fisher Science Education White Vinegar	Each	S04577
LaMotte™ Reagent Refills	Each	S72394
LaMotte Ammonium Hydroxide	Each	S72385
Fisher Science Education Isopropyl Alcohol	4 L	S25371A
<b>Cultures</b>		
Edvotek™ BactoBeads™ Lyophilized Bacterial Cultures and Cells	Each	S05688
Carolina™ Basic Bacteriophage Culture Set A	Each	S21829ND
Carolina <i>Streptococcus agalactiae</i> , MicroKwik Culture™, PATHOGEN, Vial	Each	S21825ND
<b>Equipment</b>		
Labconco™ 6 ft. Protector ClassMate Laboratory Hood	Each	S71844
Labconco™ Neutrodine™ Molecular Filter	Each	S28323
Edvotek™ Classroom PCR LabStation™ Kit	Each	S05705
SPECTRONIC™ 200 Spectrophotometer	Each	S06240
<b>Glass and Plasticware</b>		
Fisherbrand™ Traceable™ SpatulaBalance™ Weighing Spatula	Each	S95267
PYREX™ VISTA™ Educational-Grade Cylinders	12/Cs	S95186C
Eisco™ Glass Burette with PTFE Key Stopcock	Each	S27992
Vernier Visible Range Plastic 3.5 mL Cuvettes	Each	S16040ND
Kimble™ KIMAX™ Petri Dishes	12/Pk	S31472
<b>Liquid Handling</b>		
Edvotek™ Variable Micropipets	Each	S90243B
Sartorius mLINE™ Pipette Multipack	Each	S35895
<b>Cleaning Products</b>		
Saniclave RS-SC-50 Steam Autoclave	Each	S07885
Glassware Drying Rack	Each	S47855
Fisherbrand™ Sparkleen™ 1 Detergent	3.25 lb.	S701101
Dynalon™ Kartell™ Pipet/Buret Washer	Each	S31880
<b>PPE</b>		
Kimberly-Clark Professional™ Kimtech™ Purple Nitrile™ Gloves	100/Pk	S78944

# Solutions to Take You Further, Faster

Shop products designed to help ensure reliable results through efficient research.

Description	Quantity	Cat. No.
<b>Antibodies &amp; Purification</b>		
Invitrogen™ Molecular Probes™ Image-iT™ Fixation/Permeabilization Kit	Each	R37602
Invitrogen™ ActinGreen™ 488 ReadyProbes™ Reagent (AlexaFluor™ 488 Phalloidin)	Each	R37110
Invitrogen™ ActinRed™ 555 ReadyProbes™ Reagent (Rhodamine Phalloidin)	Each	R37112
<b>Bacterial Culture</b>		
Invitrogen™ Luria Broth Base, Powder	500 g	12-795-027
Gibco™ LB Broth	500 mL	10-855-021
Gibco™ Terrific Broth	1 L	A1374301
Invitrogen™ Select Agar™, Powder	500 g	30-391-023
Invitrogen™ Library Efficiency™ DH5a Competent Cells	Each	18-263-012
Invitrogen™ LB Broth Base; 500 g	40 Reactions	12-780-052
<b>Cell Counting</b>		
Invitrogen™ Countess™ Reusable Slide	Each	A25750
Invitrogen™ Chamber Slides for Countess™ Cell Counter	50 Slides	C10228
Gibco™ Trypan Blue Solution, 0.4%	100 mL	15-250-061
<b>Cell Culture Media and Additives</b>		
Invitrogen™ UltraPure™ DNase/RNase-Free Distilled Water	500 mL	10-977-015
Gibco™ DMEM, High Glucose	500 mL	11-965-092
Gibco™ RPMI 1640 Medium	500 mL	11-875-093
Gibco™ Neurobasal™ -A Medium	500 mL	10-888-022
Gibco™ B-27™ Supplement (50X), Minus Vitamin A	10 mL	12-587-010
Gibco™ GlutaMAX™ Supplement	100 mL	35-050-061
Gibco™ Antibiotic-Antimycotic (100X)	100 mL	15-240-062
Gibco™ Trypsin-EDTA (0.5%), No Phenol Red	100 mL	15-400-054
Gibco™ Recovery™ Cell Culture Freezing Medium	50 mL	12-648-010
Gibco PBS Solution, 1X, pH 7.4	500 mL	10-010-023
Gibco Penicillin-Streptomycin (10,000 U/mL)	100 mL	15-140-122
<b>Electrophoresis and Stains</b>		
Invitrogen™ E-Gel™ Power Snap Electrophoresis System Starter Kit, SYBR Safe 1.2%	Each	G8351ST
Invitrogen™ UltraPure™ Agarose	100 g	16-500-100
Invitrogen™ NuPAGE™ 4 to 12%, Bis-Tris, 1.0 mm, Mini Protein Gel, 10-Well	10/Pack	NP0321BOX
Applied Biosystems™ PowerUp™ SYBR™ Green Master Mix	5 mL	A25742
Invitrogen™ TrackIt™ 1 Kb Plus DNA Ladder	500 µL	10-488-085
Invitrogen™ Safe Imager™ 2.0 Blue-Light Transilluminator	Each	G6600
Invitrogen™ Safe Imager™ Viewing Glasses	Each	S37103
Invitrogen 1 Kb Plus DNA Ladder, 100 to 1,500 bp	500 Applications	10-787-018
Invitrogen E-Gel Power Snap Electrophoresis Device	Each	G8100
Invitrogen™ SYBR™ Safe™ DNA Gel Stain	400 µL	S33102
<b>PCR</b>		
Applied Biosystems™ ProFlex™ PCR System, 3 x 32-Well	Each	4484073
<b>Transfection</b>		
Invitrogen™ Lipofectamine 3000 Transfection Reagent	0.1 mL	L3000001

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## Biotechnology

## Genetics

## Genetics: The Study of Heredity Flip Chart with Online Multimedia Lesson



Combine illuminating graphics and write-on/wipe-off exercises with multimedia lessons to master key life science topics.



- Provides graphical instruction and write-on/wipe-off activities with one-year online access to a corresponding Multimedia Lesson featuring in-depth, interactive coverage of the concept
- The Multimedia Lesson can be accessed by a teacher and ALL of your students anywhere, anytime, on any device – including Chromebooks, tablets, computers and mobile devices.
- Flip Chart Set features 10 Laminated, Double-Sided Charts
- Side 1 features a graphic overview of the topic while Side 2 provides corresponding write-on/wipe-off activities for review and reinforcement
- Includes a Teacher Guide with copymaster activities and review questions
- Spiral-bound and mounted on a sturdy easel for years of use, the Flip Chart sets are ideal for small group instruction, learning centers, independent use or classroom reference
- Also included is one year access to a corresponding online multimedia lesson for a teacher and all their students
- Each lesson features Animated, Narrated Tutorials; Interactive Exercises & Activities; Virtual Lab Investigations; Illustrated, Narrated Glossary; Visual Resource Library; and an Inquiry-Based Student Activity Guide
- Developed under sponsorship of the National Institutes of Health (NIH), the lessons are perfect for individual student instruction on any computer as well as classroom presentation on any Interactive Whiteboard
- Covers: Inheritance of Traits; Chromosomes & Karyotypes; Gregor Mendel; Mendel's Experiments; Dominant & Recessive Traits; Punnett Squares; Phenotypes & Genotypes; Codominance; and Making a Pedigree

## Chromosomes, Genes & DNA Flip Chart with Online Multimedia Lesson



Combine illuminating graphics and write-on/wipe-off exercises with multimedia lessons to master key life science topics.



- Provides graphical instruction and write-on/wipe-off activities with one-year online access to a corresponding Multimedia Lesson featuring in-depth, interactive coverage of the concept
- The Multimedia Lesson can be accessed by a teacher and ALL of your students anywhere, anytime, on any device – including Chromebooks, tablets, computers and mobile devices.
- Flip Chart Set features 10 Laminated, Double-Sided Charts
- Side 1 features a graphic overview of the topic while Side 2 provides corresponding write-on/wipe-off activities for review and reinforcement
- Includes a Teacher Guide with copymaster activities and review questions
- Spiral-bound and mounted on a sturdy easel for years of use, the Flip Chart sets are ideal for small group instruction, learning centers, independent use or classroom reference
- Also included is one year access to a corresponding online multimedia lesson for a teacher and all their students
- Each lesson features Animated, Narrated Tutorials; Interactive Exercises & Activities; Virtual Lab Investigations; Illustrated, Narrated Glossary; Visual Resource Library; and an Inquiry-Based Student Activity Guide
- Developed under sponsorship of the National Institutes of Health (NIH), the lessons are perfect for individual student instruction on any computer as well as classroom presentation on any Interactive Whiteboard
- Covers: Chromosomes; Genes; DNA/ RNA Structure; From DNA to Protein; DNA Transcription; Translation; The Genetic Code; and Mutations

Cat. No.	Description	Price
S81109	The Study of Heredity Flip Chart with Online Multimedia Lesson	50.00/Ea

Cat. No.	Description	Price
S81108	Chromosomes, Genes & DNA Flip Chart with Online Multimedia Lesson	50.00/Ea

## Chromosomes 3-D Model Kit

Assemble and use 3-D models to visualize and investigate key science structures.



- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

Cat. No.	Description	Price
S81446	Chromosomes 3-D Model Kit	37.50/Ea

## United Scientific™ DNA Model Kit

Accurately depicts a 16-base-pair section of DNA.

- Built to a scale of 10cm to 1nm
- Phosphate-deoxyribose backbone and four bases represented by custom plastic moldings
- Shows shapes of molecules in scale and illustrates bonding between them



- Model is supported by a central pillar, which can rotate on a circular stand
- Dimensions: 25 x 9 x 9 in. (63.5 x 22.9 x 22.9cm)

**S06993:** Single Model, unassembled

**S06991:** Four models, one assembled, three unassembled

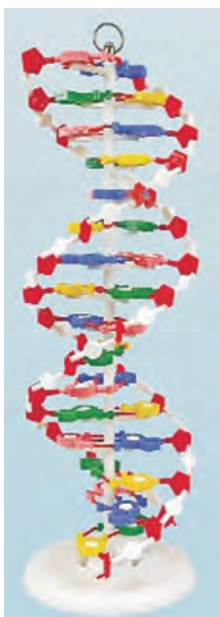
Cat. No.	Description	Price
S06993	1 DNA Model	56.25/Ea
S06991	4 DNA Models	280.00/Ea

## United Scientific™ DNA Model

Pre-assembled DNA model built to a scale of 10cm to 1nm.

Accurately depicts a 16 base pair section of DNA.

- Phosphate-deoxyribose backbone and the four bases represented by custom plastic moldings
- Moldings show the shapes of the molecules in scale and illustrate the bonding between them
- Handedness of the backbone chains and the relative sizes of the major and minor grooves in the relaxed molecule are correctly portrayed
- Supported by a central pillar, which can rotate on a circular stand



### ORDERING INFORMATION:

Shipping weight: 2.5 lb.

Dimensions: 25 x 9 x 9 in.

Cat. No.	Description	Price
S05910	DNA Model	90.00/Ea

## DNA Structure 3-D Model Kit

Assemble and use 3-D models to visualize and investigate key science structures.

- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home



Cat. No.	Description	Price
S81451	DNA Structure 3-D Model Kit	37.50/Ea

## Lab-Aids™ Molecular Model of DNA and its Replication

Build a segment of the DNA molecule and see what a double helix is like. Model can be 'unzipped' allowing for replication of DNA segment.

This basic introduction to the double helix model of DNA uses simple components developed exclusively by Lab-Aids™. Those unique components include double nitrogen pyrimidine bases are constructed proportionately larger in diameter than the single nitrogen purine bases. Bases are linked by a unique hydrogen bond. The deoxyribose sugar is pentagon-shaped representing its actual molecular structure. Twelve eight-rung models can be constructed with each kit or attach individual models together to form a giant double helix model that will be more than nine feet long. Includes 36 student worksheets, a Teacher's Guide, and twelve packets of color-coded components, one for each group of two students.



**ORDERING INFORMATION:** Class size: 12 students.

### INCLUDES:

12 color-coded components packets containing: 16 Deoxyribose-sugar groups - black linkage; 16 Phosphate groups - white tubes; 8 Nitrogen (purine) bases: 4 Adenine (A) - orange tubes, 4 Guanine (G) - yellow tubes; 8 Nitrogen (pyrimidine) bases: 4 Cytosine (C) - blue tubes, 4 Thymine (T) - green tubes; 8 Hydrogen bonds - opaque rods. One teacher's guide; 38 student worksheets and guides

Cat. No.	Description	Price
S19379	Molecular Model of DNA/Replication Kit	124.00/Ea

## DNA Replication 3-D Model Kit



Assemble and use 3-D models to visualize and investigate key science processes.

- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home



Cat. No.	Description	Price
S81450	DNA Replication 3-D Model Kit	37.50/Ea

## Transcription 3-D Model Kit



Assemble and use 3-D models to visualize and investigate key science processes.



- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home

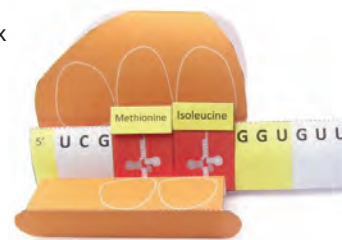
Cat. No.	Description	Price
S81465	Transcription 3-D Model Kit	37.50/Ea

## Translation & Protein Synthesis 3-D Model Kit



Assemble and use 3-D models to visualize and investigate key science processes.

- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home



Cat. No.	Description	Price
S81466	Translation and Protein Synthesis 3-D Model Kit	37.50/Ea

## Gene Cloning 3-D Model Kit



Assemble and use 3-D models to visualize and investigate key science processes.

- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home



Cat. No.	Description	Price
S81456	Gene Cloning 3-D Model Kit	37.50/Ea

## How Do You Clone a Gene?

Gain an understanding of the structure of DNA, a genetically engineered clone and how genes are cloned in plasmids.

Use EDVO-links to demonstrate various concepts in biotechnology.

- Plasmids are circular bacterial DNA
- Plasmids act as vehicles that can be genetically engineered to express gene products, such as insulin and growth hormone
- Set of multicolored links demonstrate a variety of molecular biology simulations
- Students learn about digesting DNA with restriction enzymes and cloning genes in plasmids



### ORDERING INFORMATION:

Class size: 10 lab groups.

### INCLUDES:

Instructor guide with suggested activities and demonstrations and eight plastic EDVO-links

Cat. No.	Description	Price
S94594	How Do You Clone a Gene?	81.00/Ea

## Lab-Aids™ DNA Extraction and Isolation Kit

Use chemical solutions to extract DNA from plant cells, observe some properties of DNA and understand the structure and function of DNA.



A 'low-tech' hands-on solution to presenting some high-tech topics. Extract DNA from strawberries and examine some physical properties. A complete classroom kit that provides everything necessary (except strawberries) along with specially prepared cell lysating solutions and DNA precipitating.

This kit allows students to easily extract DNA by first crushing the strawberry, then lysing to release the cell components and finally precipitating and viewing the DNA after spooling the DNA on a splint. This kit contains step-by-step student instructions and teacher background information.

It is designed for a class of 8 teams of 4 and contains all the material to conduct 2 extractions. This is an excellent lab activity for all levels of teaching and for transferring complex concepts from the abstract into real observations. It allows students to visualize DNA and understand some of its properties. It illustrates the enormous length of the DNA molecule.

### ORDERING INFORMATION:

Class size: 32 students working in teams of four.

### INCLUDES:

- Four bottles cell lysis solution
- Two bottles DNA precipitation solution (keep ice cold until used; can be kept in a freezer)
- Eight plastic test tubes
- Eight plastic droppers
- Eight funnels
- Eight plastic sleeves
- Eight heavy-duty polybags
- Eight graduated cups
- One package cheesecloth squares
- One package wood splints
- 32 student worksheets and guides
- Instruction manual

### REQUIRES: Strawberries

Cat. No.	Description	Price
S90182	DNA Extraction and Isolation	130.00/Ea



## Lab-Aids™ DNA-, RNA-Protein Synthesis Modeling Kit

Demystifies the DNA/RNA connection in protein synthesis, replication, transcription and translation is modeled and experience how information stored in DNA is expressed as a finished protein.

This hands-on modeling approach makes the complex chemistry of DNA/RNA protein synthesis easily understood. The kit includes twelve packets of color-coded molecular model components.

**Following step-by-step directions, students will:**

- Build and replicate an eight-rung DNA molecule
- Use half the DNA ladder to build mRNA (messenger RNA)
- Simulate mRNA movement by placing the mRNA on a ribosome
- Simulate translation by matching the mRNA and its codons to the tRNA (transfer RNA) and its anti-codons
- Disconnect the protein chain so the process can continue

**Accommodates unlimited classes, each with 12 groups of 2 students.**

### INCLUDES:

12 sets of color-coded parts, teacher manual, background information and 24 student worksheets



## Genes in a Tube™

Students can transfer their DNA to a tube that can be worn as a pendant.

- Students extract and precipitate their own DNA
- Transfer to tube or save on DNA report card

### INCLUDES:

instructions, lysis buffer, NaCl solution, Protease, Tris buffer, FlashBlue™ solution, microcentrifuge tubes, sterile cotton tipped applicators, transfer pipets, tubes for DNA precipitation, Gene Tubes™, and string

**REQUIRES:** Ice cold alcohol (95% ethanol or isopropyl alcohol) and a water bath (56°C)



Cat. No.	Description	Price
S68635	Genes in a Tube DNA Pendant	133.00/Ea

## Lab-Aids™ Genetic Concepts Kit

Rediscover Mendel's Law of Genetics, simulate gametogenesis and fertilization and develop understanding of purebred inheritance, hybrid inheritance with one allelic pair and dihybrid cross with allelic pairs. Understand co-dominance or blending and Law of Dominance and explore Law of Segregation and Recombination as well as Law of Independent Assortment.



Duplicate Mendel's years of work and research in five lab periods. Through a series of simulated experiments, students experience the same problems encountered by the 'Father of Genetics.' Students 'rediscover' his Law of Genetics using specially designed GAM-ETO-DISCS and TETRADICE to simulate Gametogenesis and fertilization. These unique Lab-Aids™ items produce random genotype combinations that are statistically consistent. As consistent as if done with living organisms. This lab activity was developed in a game format to achieve a high level of interest and involvement by the students. Accommodates unlimited classes, each with 12 groups of 2 students.

## United Scientific™ Protein Synthesis Manipulative Kit

Teach protein synthesis with hands-on manipulatives.

Large, colorful models of DNA, mRNA, Ribosomes, tRNA and Amino Acids. Includes magnets to attach to the blackboard for a visual simulation of protein synthesis.

- Smaller size models provide students with hands-on learning
- Activities include identifying the amino acid sequence resulting from a unique DNA sequence
- Includes downloadable teacher guide with suggested activities



### ORDERING INFORMATION:

Class size: 30 students working in groups of five.

Cat. No.	Description	Price
S65998	Protein Synthesis Manipulative Kit	422.00/Ea

Cat. No.	Description	Price
S25084	Genetics Concepts Kit	136.00/Ea

## Kemtec™ Genetics I Kit

Kemtec™ Genetics I Kit includes three activities that introduce students to Punnett Squares, and other genetic topics

- Make genetics personal by helping students assess their own genetic traits
- Model homologous chromosomes to demonstrate how reproduction results in the inheritance of genetic variation
- Use Punnett squares to predict the distribution and variation of expressed traits in humans, plants, and animals
- Introduces allele frequency, phenotypes, genotypes, monohybrid and dihybrid crosses, test crosses, dominance, incomplete dominance, codominance, and recessives
- Addresses National Standards for Grade Levels 6-10
- MS-LS3-2, MS-LS3.A, MS-LS3.B, HS-LS3-3



Cat. No.	Description	Price
S30806	Genetics I Kit	124.00/Ea

## Exploring Biotechnology with Green Fluorescent Protein (GFP)

Four experimental modules are combined into one experiment to provide a comprehensive biotechnology exploration focusing on the green fluorescent protein (GFP).

- Bacterial cells are transformed to express the green fluorescent protein (GFP)
- Transformed cells are then grown and the GFP is purified by column chromatography
- The purity of the protein fractions are analyzed by SDS polyacrylamide electrophoresis

### Experiment times:

- Module I: Transformation, 45 minutes
- Module II: Isolation of GFP, 45 minutes
- Module III: Purification of GFP by Chromatography, 45 minutes
- Module IV: Analysis by GFP by Denaturing SDS Gel Electrophoresis, one hour

### ORDERING INFORMATION:

Contains materials for six experiments with four modules each.

### STORAGE:

Some components require freezer storage

### REQUIRES:

Incubation oven; Two water baths; Microwave or hotplate; Automatic micropipet and tips; Pipet pumps or bulbs; Ice; Long-wave UV light; Ring stand and clamps; Lab glassware; Ice; Vertical gel electrophoresis apparatus; Power supply; Three polyacrylamide gels (12%); Plastic trays or large weigh boats for optional staining and destaining; Glacial acetic acid; Methanol

### INCLUDES:

Instructions; BactoBeads; Plasmid DNA for GFP; IPTG; Ampicillin antibiotic; Calcium chloride; ReadyPour™ Luria broth agar; Luria broth media for recovery; Petri plates; Pipets; Calibrated transfer pipets; Inoculating loops; Microtest tubes with attached caps; Toothpicks; Dry matrix for columns; Chromatography columns; Green fluorescent protein extracts; Elution buffer; Protein molecular weight standards; Protein denaturation solution; Glycerol solution; Tris-Glycine-SDS buffer; Stains



Cat. No.	Description	Price
S05657	Exploring Biotechnology with Green Fluorescent Protein (GFP)	221.00/Ea

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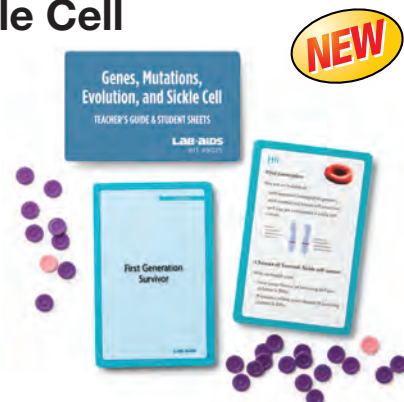
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## Lab-Aids™ Genes, Mutations, Evolution & Sickle Cell (Developed by SEPUP)

Follow the inheritance of a hemoglobin mutation through generations with the Lab-Aids™ Genes, Mutations, Evolution, and Sickle Cell science kit.

- In Part 1, students follow the inheritance of a hemoglobin mutation through two generations. Students identify patterns in their data and investigate the cause-and-effect relationship between environmental conditions and the frequency of a trait in a population. Based on their data collection and analysis, students construct explanations for how changes to a gene influence an organism's ability to survive and reproduce.
- Specifically, students use the example of hemoglobin to explain how structural changes to genes (i.e., mutations), lead to changes in protein structure and function, and how this can lead to changes in the function of red blood cells which, in turn, can affect survival of individuals with the mutation.
- In Part 2, students use a computer simulation to extend their investigation of the hemoglobin mutation. Initially, the simulation extends their data from the previous activity through 30 generations. Then students are able to adjust the environmental conditions to see how access to resources and the prevalence of malaria influence the distribution of the hemoglobin gene over time. Part 2 requires students to have access to computers with internet access. Part 2 works best when students work in pairs.
- Accommodates unlimited classes, each with 8 groups of 4 students.
- Performance Expectations: MS-LS3-1, MS-LS4-6, MS-LS4-4
- Disciplinary Core Ideas: MS-LS3.A, MS-LS3.B, MS-LS4.C, MS-LS4.B
- Crosscutting Concepts: Structure and Function, Cause and Effect, Patterns



- Common Core State Standards – Mathematics: 6.RP.A.1, 6.SP.B.5
- Common Core State Standards – ELA/Literacy: SL.8.1, SL.8.4
- Includes: 32 First Generation profile cards, 32 First Generation Survivor profile cards, 34 Hemoglobin plastic disks (16 HH typical, 16 Hh sickle cell carrier, and hh sickle cell anemic), 32 Student Worksheet and Guides, 1 Teacher's Guide

Cat. No.	Description	Price
S27122	Genes, Mutations, Evolution & Sickle Cell (Developed by SEPUP)	124.00/Ea

## Lab-Aids™ Inheritance of Traits (Developed by SEPUP)

Model and explain wide variations that result from sexual reproduction, and identify cause-and-effect relationships for additional traits.

- Students model the diversity of offspring possible from two parents and discover patterns of inheritance other than strict dominant/recessive traits.
- These patterns help them model and explain the wide variation that can result from sexual reproduction and explore the cause-and-effect relationships for additional traits of the critters
- 32 pennies, a supply of small sticky notes, and eight sets of colored pencils are required for use during the activity but are not included in the materials kit.

### INCLUDES:

- 56 1.5 in. foam balls (critter body segments)
- 16 1 in. foam balls (critter heads)
- 16 blue chenille stems
- 16 orange chenille stems
- 100 round-head brass fasteners
- 40 red straws
- 50 green straws
- 60 blue straws
- 50 yellow paper clips
- 40 blue thumbtacks
- 100 toothpicks



- 32 Student Worksheet and Guides
- 1 Teacher's Guide

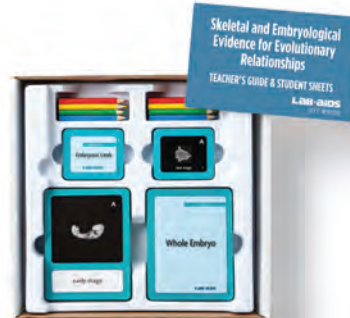
Cat. No.	Description	Price
S27116	Inheritance of Traits (Developed by SEPUP)	250.00/Ea

## Lab-Aids™ Skeletal & Embryological Evidence for Evolutionary Relationships (Developed by SEPUP)



Examine forelimb skeletons of six species to identify bones with homologous structures and functions.

- In this three-part activity, students first examine forelimb skeletons of six species to identify bones with homologous structures and Although the fully formed limbs appear different on the outside, students are able to identify similarities at the skeletal level.
- Students then examine embryological development of limbs and notice many similarities between different species not obvious in the mature animals.
- students examine the development of whole embryos of different species to infer evolutionary relationships.
- Many teachers prefer that each pair of students work with the card sets rather than groups of four.
- Performance Expectations: MS-LS4-3, MS-LS4.2
- Disciplinary Core Ideas: MS-LS4.A
- Science and Engineering Practices: Analyzing and Interpreting Data
- Crosscutting Concepts: Patterns, Structure and Function
- Common Core State Standards – ELA/Literacy: RST.6-8.7
- Includes: 8 sets of 12 Embryonic Limb Cards, 8 sets of 20 Whole Embryo Cards, 8 sets of colored pencils, 32 Student Worksheets and Guides, 1 Teacher's Guide



Cat. No.	Description	Price
S27123	Skeletal & Embryological Evidence for Evolutionary Relationships (Developed by SEPUP)	212.00/Ea

## Sickle Cell Gene Detection

Gain an understanding of the effect of mutations on health and disease.

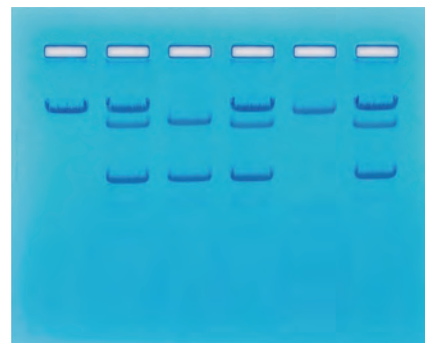
- Genetically inherited diseases in humans can be caused by a single nucleotide mutation resulting in a change. Such a substitution can affect the structure and function of a critical protein, rendering it partially or completely nonfunctional. A classic example is hemoglobin in sickle cell anemia
- Agarose gel-based experiment designed for DNA staining and visualization with InstaStain™ Methylene Blue
- Demonstrates the use of a restriction enzyme that discriminates between the normal and sickle cell hemoglobin genes
- This experiment does not contain human DNA

### INCLUDES:

Instructions, Ready-to-Load QuickStrip™ DNA Samples, UltraSpec-Agarose™, Electrophoresis Buffer (50X), 10X Gel Loading Solution, FlashBlue™ DNA Stain, InstaStain™ Blue Cards, & Disposable Pipets

### REQUIRES:

Horizontal gel electrophoresis apparatus; D.C. power supply; Automatic micropipets with tips; Balance; Microwave, hotplate or burner; Pipet pump; 250mL flasks or beakers; Hot gloves; Safety goggles and disposable laboratory gloves; Small plastic trays or large weigh boats (for gel destaining); DNA visualization system (white light); Distilled or deionized water



Cat. No.	Description	Price
S94670	Sickle Cell Gene Detection (DNA-based)	117.00/Ea

## The Mystery of the Crooked Cell

Demonstrates detection of the mutation that causes sickle cell anemia.

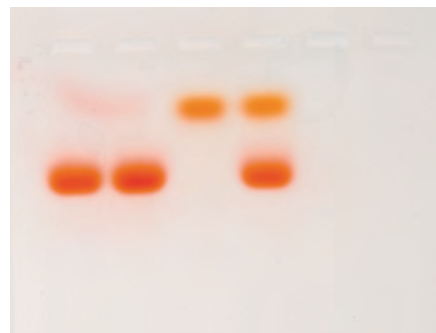
Students use electrophoresis to separate dyes that represent patient samples and controls. Developed in partnership with Boston University School of Medicine.

### INCLUDES:

- Ready-to-Load™ dye samples
- Agarose powder
- Practice gel-loading solution
- Electrophoresis buffer
- Microtipped transfer pipets
- Instructions

### REQUIRES:

- Electrophoresis tank
- Power supply



Cat. No.	Description	Price
S96377	The Mystery of the Crooked Cells kit	72.00/Ea

## Lab-Aids™ Genetic Equilibrium and Natural Selection

Students study the principles of genetic equilibrium and natural selection as a process of evolution. Lab-Aids™ Genetic Equilibrium and Natural Selection is a practical simulation to help students understand these concepts.

Students study the principles of genetic equilibrium and natural selection as a process of evolution using this kit. A simulation is used to develop insights about the genetic process involved when natural selection operates within a population in genetic equilibrium. Students use the data collected in the Hardy-Weinberg Equilibrium to understand better the actual complexity of natural selection. Accommodates unlimited classes, each with 15 groups of 2.

### INCLUDES:

Teacher's guide; 30 student worksheets and guides; 15 shakers; 60 alleles, plastic, dark-colored; 40 alleles, plastic, light-colored



Cat. No.	Description	Price
S20971	Kit: Genetic Equilibrium and Natural Selection	120.00/Ea

## In Search of My Father

Solve the mystery of two boys separated from their parents a decade ago.

- Students identify the biological mother by mitochondrial DNA
- Identify the biological father using chromosomal DNA
- Complete in 45 minutes

### INCLUDES:

- Instructions
- Ready-to-Load™ dye samples
- Agarose powder
- Practice gel-loading solution
- Buffer
- Microtipped transfer pipets

### REQUIRES:

- Electrophoresis apparatus
- Power supply
- Microwave or hotplate

### ORDERING INFORMATION:

For 10 lab groups.



Cat. No.	Description	Price
S05713	In Search of My Father	72.00/Ea

## Cholesterol Diagnostics

Study cholesterol-based diseases.

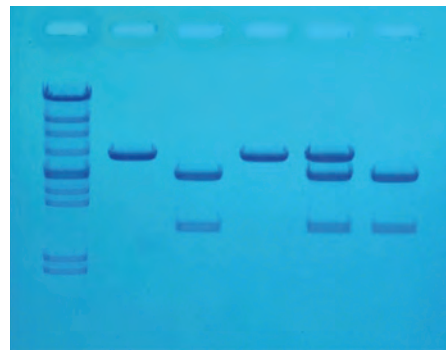
- In this experiment, a simulated genetic test for familial hypercholesterolemia (FH) is demonstrated in which patients are tested for a DNA polymorphism linked to the FH gene
- Develop an understanding of the genetics and DNA-based diagnostics of cholesterol-based diseases
- This experiment does not contain human DNA

### INCLUDES:

Instructions, Ready-to-Load QuickStrip™ DNA Samples, UltraSpec-Agarose™, Electrophoresis Buffer (50X), 10X Gel Loading Solution, FlashBlue™ DNA Stain, InstaStain™ Blue Cards, & Disposable Pipets

### REQUIRES:

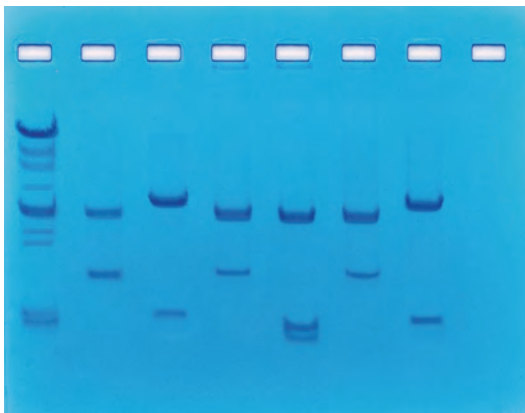
Horizontal gel electrophoresis apparatus; DC power supply; Automatic micropipets with tips; Balance; Microwave, hotplate or burner; Pipet pump; 250mL flasks or beakers; Hot gloves; Safety goggles and disposable laboratory gloves; Small plastic trays or large weigh boats for gel destaining; DNA visualization system (white light); Distilled or deionized water



Cat. No.	Description	Price
S94608	Cholesterol Diagnostics	117.00/Ea

## DNA Fingerprinting Using Restriction Enzymes

Learn about restriction enzymes.



- The objective of this simulated forensic analysis is to develop an understanding of DNA fingerprinting by use of restriction enzymes
- Hypothetical crime scene samples are provided in addition to DNA samples, restriction enzymes and reaction buffer to digest suspect's DNA
- Digestion products are separated by agarose gel electrophoresis
- Students determine the guilty suspect through identification of the unique restriction enzyme fragmentation patterns
- Does not contain human DNA
- Some components require refrigeration, some require freezing

### ORDERING INFORMATION:

Contains materials for six gels (six lanes each) with InstaStain™ Methylene Blue.

### INCLUDES:

instructions, "crime scene" and "suspect" Ready-to-Load™ DNA samples, DNA Standard Marker, Dryzymes™ - Eco RI and Hind III, Enzyme Reaction Buffer, Reconstitution Buffer, Enzyme Grade Water, UltraSpec-Agarose™, 10X Gel Loading Solution, 50X Concentrated Electrophoresis Buffer, Practice Gel Loading Solution, InstaStain™ Blue Cards, FlashBlue™ DNA Stain, Disposable Pipets, & Microcentrifuge Tubes

### REQUIRES:

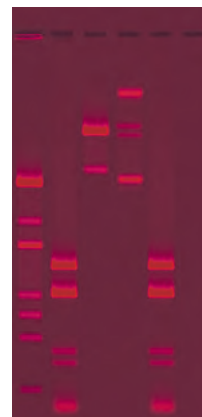
Required: Horizontal gel electrophoresis apparatus; DC power supply; Automatic micropipets with tips; Water bath/Hotplate, Bunsen burner or microwave oven **Recommended:** DNA visualization system (white light); Staining tray and net; 250mL flasks; Pipet pump; Hot gloves; Marking pens; Distilled or deionized water; Ice

Cat. No.	Description	Price
S94610	DNA Fingerprinting Using Restriction Enzymes	146.00/Ea

## Analysis of DNA Methylation using Restriction Enzymes Experiment Kit

Training kit to understand mechanisms of DNA methylation.

- Explores effects of DNA methylation on restriction enzyme activity
- Plasmid DNA will be digested with the restriction enzymes *DpnI* and *DpnII*
- Methylated, unmethylated DNA will produce restriction fragments that are distinct from one another
- Restriction fragments analyzed using agarose gel electrophoresis



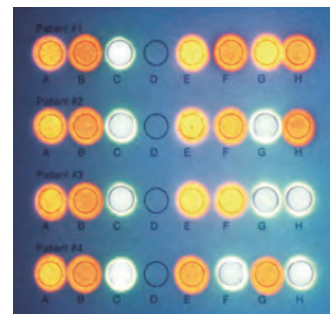
Cat. No.	Description	Price
S42875	Analysis of DNA Methylation using Restriction Enzymes Experiment Kit	140.00/Ea

## DNA/RNA Microarrays

Membrane microarray technology enables scientists to screen large numbers of samples in one assay.

Benefit from cost savings by reducing the sample size, while saving time and yielding accurate results.

- Students apply simulated DNA and RNA samples to a membrane to screen for positive and negative samples
- Complete in one hour



### ORDERING INFORMATION:

For 10 groups.

### INCLUDES:

- Instructions
- Simulated patient DNA and RNA samples and controls
- Microarray cards
- Plastic bags to incubate membrane
- Microtest tubes
- Pipets

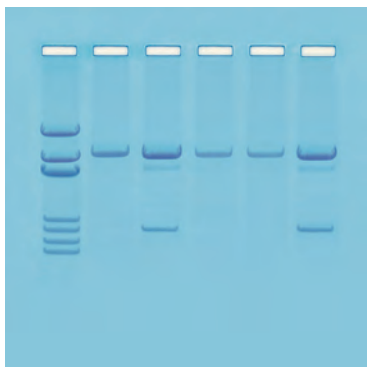
### REQUIRES:

Automatic micropipets and tips, distilled water and beakers or flasks

Cat. No.	Description	Price
S05648	DNA/RNA Microarrays	146.00/Ea

## Detection of Genetically Modified Organisms Kit

Use of agarose gel electrophoresis to explore molecular methods used by scientists to identify genetically modified organisms.



- No thermal cycler is required
- Students are encouraged to explore controversy surrounding use of genetically modified organisms
- For 8 gels
- Completes in 60 minutes
- **Includes:** Instructions, Ready-to-Load™ QuickStrip™ DNA samples, UltraSpec-Agarose™ powder, practice gel loading solution, electrophoresis buffer, InstaStain™ Blue and FlashBlue™ stain, calibrated pipette, and microtipped transfer pipettes
- **Materials needed:** Electrophoresis apparatus, power supply, automatic micropipet and tips, balance, microwave or hot plate, white light visualization system
- **Storage:** Stable at room temperature. Recommended to store Ready-to-Load QuickStrip™ samples in refrigerator

Cat. No.	Description	Price
S21121	Detection of Genetically Modified Organisms Kit	117.00/Ea

## Eisco™ Genetic Traits Taste Testing Strips

Demonstrate how the ability to taste a certain compound is based on heredity.

Is it sweet, salty, bitter or tasteless?

- Depending on their own genetics, students will experience different tastes from the test strips
- PTC — seven out of 10 students will detect a definite taste; remainder will not
- Sodium benzoate — genetics determine if the paper tastes sweet, salty, bitter or tasteless. If a student can taste PTC, he may not be able to taste thiourea
- Control strips have no PTC, sodium benzoate or thiourea



### ORDERING INFORMATION:

Each test strip comes in a pack of 100.

Cat. No.	Description	For Use With (Application)	Price
S85287A	Ptc Paper Taste Strip	Used to demonstrate the effects of heredity on taste, seven out of 10 students will detect a definite taste, remainder will not	3.90/Pk
S85289A	Thiourea Paper Taste Strip	Used to demonstrate the effects of heredity on taste	3.90/Pk
S85288A	Sodium Benzoate Paper Taste Strip	Genetics determine if the paper tastes sweet, salty, bitter or tasteless if a student can taste ptc, he may not be able to taste thiourea	3.90/Pk
S85286A	Control Paper Taste Strip	Used to demonstrate the effects of heredity on taste	3.85/Pk

## Electrophoresis

### DNA Fingerprinting Electrophoresis Lab Activity Educational Kit

Experiments to perform agarose gel electrophoresis on four DNA samples to determine if DNA from suspects matches that of DNA found at a crime scene. Innovating Science DNA Fingerprinting Electrophoresis Lab Activity Educational Kit, help students to learn about restriction enzymes and importance of these enzymes in DNA fingerprinting process.

- Contains enough materials for 8 groups
- Includes Teacher's Guide and Student Study copymasters

**INCLUDES:**  
 200mL Prepared Agarose 0.8% Solution;  
 500mL Tris-Borate-EDTA Buffer 5X; 60mL DNA Stain; 10µg Crime Scene DNA;  
 10µg Victim DNA; 10µg Suspect #1 DNA;  
 10µg Suspect #2 DNA



Cat. No.	Description	Price
S28493	DNA Fingerprinting Electrophoresis Lab Activity Educational Kit	99.00/Ea

## DNA Fingerprinting: Identification of DNA by Restriction Fragmentation Patterns

Reveals techniques used in forensic and medical procedures.

Basic concepts of DNA fingerprinting are featured in this lab by comparing crime scene DNA with suspect DNAs. Fingerprint patterns are separated by agarose gel electrophoresis and the students determine who may have done-it!

### INCLUDES:

Instructions, Ready-to-Load QuickStrip™ DNA Samples, UltraSpec-Agarose™, Electrophoresis Buffer (50X), 10X Gel Loading Solution, FlashBlue™ DNA Stain, InstaStain™ Blue Cards, & Disposable Pipets.

### REQUIRES:

Horizontal gel electrophoresis apparatus; DC power supply; Staining tray; Visualization system (white light); Micropipets with tips to obtain samples for five gels; 250mL flasks or beakers; Distilled or deionized water; Hotplate, Bunsen burner or microwave; Balance



Cat. No.	Description	Price
S11109	DNA Fingerprinting: Identification of DNA by Restriction Fragmentation Patterns	117.00/Ea

## DNA Paternity Testing Simulation Kit

This experiment introduces students to the use of DNA fingerprinting in a simulated paternity determination. A child's DNA fingerprint is compared with his parents. The experiment does not contain human DNA.

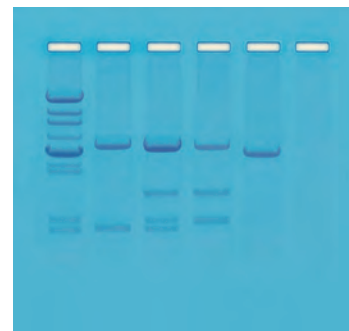
This experiment introduces students to the use of DNA fingerprinting in a hypothetical paternity determination. A child's DNA fingerprint is compared with that of his parents. The experiment does not contain human DNA.

### INCLUDES:

Instructions, Ready-to-Load QuickStrip™ DNA Samples, UltraSpec-Agarose™, Electrophoresis Buffer (50X), 10X Gel Loading Solution, FlashBlue™ DNA Stain, InstaStain™ Blue Cards, & Disposable Pipets.

### Required Materials (not included):

- Horizontal Gel Electrophoresis apparatus
- Water bath
- Visualization system (white light)
- Micropipets
- Hot-hand protector
- Deionized water
- 250mL beakers
- Hotplate or Bunsen burner
- Photodocumentation system



Cat. No.	Description	Price
S11114	DNA Paternity Testing Simulation Kit	117.00/Ea

## In Search of the Sickle Cell Gene by Southern Blot

Use Southern blots to detect mutations while gaining insight about the effects of sickle cell anemia.

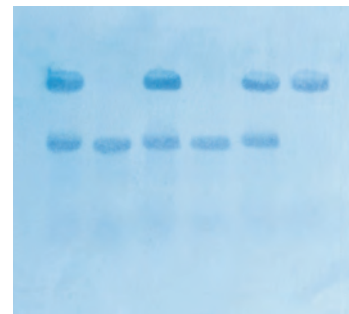
Southern blotting is an important technique used widely in clinical genetics and research. By transferring DNA from an agarose gel onto a membrane, the method allows you to analyze and identify the DNA bands on a gel precisely. Your students will use Southern blotting to find a point mutation in the hemoglobin gene indicating Sickle Cell Anemia.

### INCLUDES:

instructions, Ready-to-Load™ DNA samples, agarose, electrophoresis buffer, nylon membranes, filter paper, blot stain

### REQUIRES:

- Horizontal gel electrophoresis apparatus
- Hotplate
- Micropipets
- Balance
- Water bath
- Incubation oven
- 250mL Flasks
- All necessary safety equipment
- Concentrated HCl
- NaOH
- Forceps Distilled or deionized water



Cat. No.	Description	Price
S11315ND	In Search of the Sickle Cell Gene by Southern Blot	207.00/Ea



## Cancer Gene Detection

Track cancer formation and genetic patterns.

Immortality through uncontrolled cell division is a characteristic of cancer cells. The p53 gene is a tumor suppressor gene which prevents this. Mutations in this gene are present in more than 50% of cancers. Testing people for mutations in their p53 gene can indicate an increased risk in developing cancer. These tests raise intriguing ethical questions for both the individual tested and the family of an individual who chooses to be tested. In this experiment, students determine a pedigree for a family suspected to be carriers of mutations in their p53 genes. A DNA test indicates their likelihood of developing cancer.

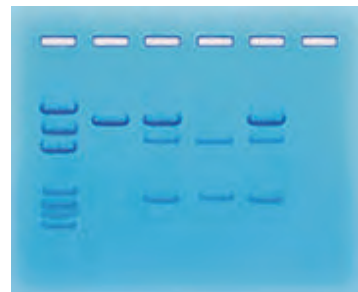
- For 6 Gels (5 lanes each) with InstaStain Methylene Blue

### INCLUDES:

Instructions, Ready-to-Load QuickStrip™ DNA Samples, UltraSpec-Agarose™, Electrophoresis Buffer (50X), 10X Gel Loading Solution, FlashBlue™ DNA Stain, InstaStain™ Blue Cards, & Disposable Pipets.

### REQUIRES:

- Horizontal gel electrophoresis apparatus
- Hotplate
- Micropipets Balance Water bath UV transilluminator
- 250mL flasks
- All necessary safety equipment
- Distilled or deionized water



Cat. No.	Description	Price
S66828	Cancer Gene Detection	117.00/Ea

## Construction and Cloning of DNA Recombinant

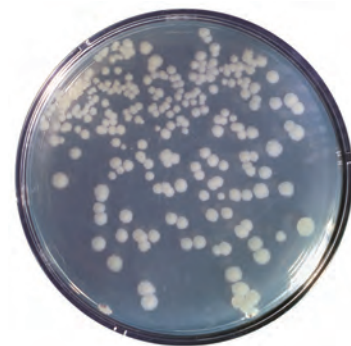
To study gene structure, function, and to enhance gene expression.

- It is divided into five modules
- Clones are constructed by ligation of a vector and a fragment insert
- The constructs are then transformed into competent cells and the cells are grown and selected for resistance
- Plasmid DNA is then isolated from the transformants, cleaved with restriction enzymes, and analyzed by agarose gel electrophoresis
- Recommended for college level courses
- For 5 lab groups
- Time: Enzyme digestion 30 min., Gel preparation 30 min., Electrophoresis 45 min., Staining 15 min. and Destaining 20 min.

Unit comprises: Electrophoresis tank and power supply, automatic micropipet with tips, balance, microwave or hot plate, waterbath, large weigh boats for staining, UV transilluminator, floating racks for microtest tubes, pipet pump or bulb, 5 or 10mL pipets, laboratory glassware, metric rulers, distilled water and ice

### INCLUDES:

Ultra-pure Water, DNA Fragments for Ligation, T4 DNA Ligase in Reaction Tube, Kanamycin Sulfate, Supercoiled Control DNA Samples, JM109 BactoBeads™, 0.05 M Calcium Chloride, ReadyPour™ LB Agar, Recovery Broth, Growth Medium, Tris-EDTA-Glucose Buffer (TEG), 2M NaOH, 10% SDS, RNase (DNase-free), Tris-EDTA Buffer, Acidified Potassium Acetate, Ultra-pure Water for Restriction Digests, 10X Restriction Enzyme Reaction Buffer, Dryzymes™ Rehydration Buffer, DNA Standard Marker, Supercoiled Plasmid Vector Standard, EcoRI Dryzymes™, PvuII Dryzymes™, XhoI Dryzymes™, InstaStain™ Ethidium Bromide, 10X Gel Loading Solution, 50X Electrophoresis Buffer, UltraSpec-Agarose, Screw Cap Tubes (sterile), Microtest tubes (0.5 ml), petri plates (sterile, 60 x 15mm), 1.5 ml microcentrifuge tubes, sterile inoculating loops/needles, 10ml pipets (sterile), sterile 50 ml culture tubes, petri plates (sterile, 100 x 15 mm)



Cat. No.	Description	Price
S11301ND	Construction and Cloning of DNA Recombinant	512.00/Ea

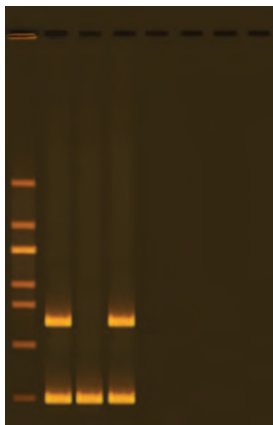
## GFP Transformation Extension: Colony PCR Experiment Kit

Determines whether cloning, transformation experiments were successful.

- Colony PCR to analyze bacteria transformed with pFluoroGreen
- Single colony used as DNA template for PCR
- Resulting PCR sample analyzed using agarose gel electrophoresis
- Used in conjunction Edvotek Transformation Kits (Part No: 222, 223 or 303)

### INCLUDES:

Instructions, PCR EdvoBeads™, Colony Primer Mix Concentrate, Control DNA Concentrate, Ampicillin, IPTG, EdvoQuick™ DNA Ladder, TE Buffer, BactoBeads™, ReadyPour™ Luria Broth Agar, Petri Dishes, ampicillin, IPTG, ReadyPour™ Luria Broth Agar (sterile), UltraSpec-Agarose™, Electrophoresis Buffer (50X), 10X Gel Loading Solution, InstaStain™ Ethidium Bromide, FlashBlue™ Liquid Stain, Petri Plates, Sterile Loops, Microcentrifuge & PCR Tubes & Wax Beads.



Cat. No.	Description	Price
S42874	GFP Transformation Extension: Colony PCR Experiment Kit	196.00/Ea

## Principles and Practice of Agarose Gel Electrophoresis

Introduce basic concepts and procedures of agarose gel electrophoresis with this complete experiment.

Demonstrate to your class how electrophoresis separates molecules on the basis of size and charge. A safe, colorful, fast and simple way to teach a technique that will engage your students.

### INCLUDES:

Instructions, Ready-to-Load QuickStrip™ Dye Samples, UltraSpec-Agarose™, Electrophoresis Buffer (50X), Practice Gel Loading Solution, Disposable Pipets.

### REQUIRES:

Horizontal gel electrophoresis apparatus; DC power supply; visualization system (white light); pipet pump and hotplate; 250mL flasks and distilled or deionized water



Cat. No.	Description	Price
S11101	Principles and Practice of Agarose Gel Electrophoresis	80.00/Ea

## Demonstration DNA Electrophoresis LabStation™

Basic electrophoresis unit suitable for instructor-led presentations.



### INCLUDES:

(1) M12 Complete™ Electrophoresis Package (1) DuoSource™ 75 Power Supply (75 V for 1 or 2 units) (1) Fixed Volume MiniPipet (35 µl) (1) Yellow Micropipet Tips(1 - 200 µl /2 Racks of 96) (1) EDVO-Kit #S-51 Whose DNA Was Left Behind?

Cat. No.	Description	Price
S68644	Demonstration DNA Electrophoresis LabStation™	446.00/Ea

## MV10 Protein Electrophoresis Apparatus

Seamless vertical electrophoresis unit is designed for separation of proteins on a single polyacrylamide gel.

Re-designed MV10 vertical protein electrophoresis unit capable of holding one vertical polyacrylamide gel, the unit has color coded parts to ensure proper orientation.

- Gel support cassette clip - holds gel securely, allows for easy placement and removal of gel
- New, sleek design
- Domed lid with sturdy overmold grip feature
- Modified shapes improves gel running speed by 10-15%
- Stabilizing feet - raises unit off bench to promote cooling and improves stabilization
- Placement of color-coded anode/cathode sides completely eliminates the chance of improper or reverse lid placement
- Electrode lead 90° right angle shape improves



stability by lowering the overall profile and thus minimizes tipping

- Patent pending

### INCLUDES:

- Seamless injection-molded base
- Safety interlock cover
- Corrosion-resistant, all-platinum electrodes with safety-insulated leads

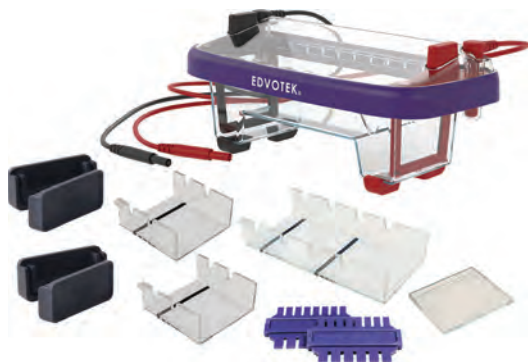
### WARRANTY:

Manufacturer's limited lifetime warranty and free technical support.

Cat. No.	Description	Price
S90257ND	MV10 Protein Electrophoresis Apparatus	315.00/Ea

## M12 Complete™ Electrophoresis Package

Student-friendly horizontal electrophoresis apparatus for DNA, dye, and protein agarose gels. Includes trays, combs, and end caps.



Run the full spectrum of horizontal electrophoresis experiments with this versatile package! The reimagined M12 Complete™ supports one or two student groups in two standard length gel trays for experiments that require less separation, or one long gel tray for experiments that require more. Produces excellent results in 30-40 minutes and includes a lifetime warranty.

**INCLUDES:**

(2) 7 x 7 cm Gel Trays, (1) 7 x 14 cm Gel Tray, (2) 6 Tooth Combs, (2) 8/10 Tooth Combs, (4) Rubber End Caps

Cat. No.	Description	Price
S90242ND	M12 Dual Horizontal Model; Two 6-Tooth Combs, Two 8-/10-Tooth Combs	256.00/Ea

## M36 HexaGel Electrophoresis Apparatus

Apparatus allows you to run six gels and separate up to 36 samples simultaneously.



Six groups of students can load their own individual gels and six gels are run together for 30-40 minutes giving results. Eliminate cumbersome gel tray taping and pour gels quickly and easily with our innovative gel tray sealing rubber end caps.

- New, sleek design
- Contoured lid enhances visualization
- Vented base
- Color coded push tabs
- Pour spout to pour out used buffer
- Replaceable platinum electrode modules

Cat. No.	Description	Price
S11515A	M36 HexaGel Electrophoresis Apparatus	426.00/Ea

## DuoSource™ 150 Power Supply

DuoSource 150 power supply is designed to power any combination of horizontal or vertical electrophoresis units.



- Safety features included a fused UL-approved, three-pronged power plug and non-conductive casing
- Equipped with an easy-to-replace 1 Amp slow burn fuse
- Maximum current is 300mA
- Delivers direct current, constant voltage at settings of 75 and 150V

Cat. No.	Description	Price
S11509E	DuoSource™ 150 Power Supply	218.00/Ea

## QuadraSource™ Power Supply

Power a combination of electrophoresis units with this 650mA power supply.



Run experiments in the least time possible with this powerful, versatile unit.

- Easy-to-use, fully programmable interface for setting voltage, current or timer control with each parameter displayed in real time
- Programs may be paused or resumed at any point

**ORDERING INFORMATION:**

10 to 300V for one to four units; maximum: 750mA.

Cat. No.	Description	Price
S05704	QuadraSource™ Power Supply, 650mA	509.00/Ea

## fisherbrand Midigel Electrophoresis System

Provide leak-free gel casting in 13 x 16cm gel tray with two comb positions.



Run up to 32 samples on one gel with combs supplied.

- Available with buffer recirculation method that prevents ionic depletion on long gel runs, keeps ionic gradients from distorting results when multiple sample series are run simultaneously and prevents pH changes that can cause problems in RNA gels
- Buffer volume: 800mL
- Can run up to 48 samples on a gel with accessory combs
- Type: Standard; L x W x H: 9.625 x 7 x 3.125 in. (24.5 x 18 x 8cm)

### INCLUDES:

Buffer chamber, safety lid with attached power supply leads, UV-transparent gel tray, nonskid rubber feet and two 1.5mm thick combs (12- and 20-well)

Cat. No.	Description	Price
S98617	Midigel Electrophoresis System	669.00/Ea

## fisherbrand FB300 Power Supply

Stackable, solid, compact power source.

- Versatile, compact FB300 runs up to three gels at once at either constant current or constant voltage
- Integral timer and auto shutoff prevents fear of losing valuable information
- No-slip feet anchor provides safe operation
- Ideal for mini SDS-PAGE, DGGE/CDGE and DNA/RNA submarine electrophoresis
- Maximum voltage: 300V
- Maximum current: 400mA
- Maximum power: 75w
- Three jacks
- Internal timer: 0 to 999 minutes



Cat. No.	Description	Price
S65533Q	FB300 Power Supply	772.00/Ea

## Thermo Scientific™ Owl™ Separation B1A EasyCast™ Mini Gel Electrophoresis System

Designed to provide flat, even banding patterns and consistent results with less hassle.



The perfect size to determine molecular weight ranges of PCR fragments or larger-sized DNA molecules.

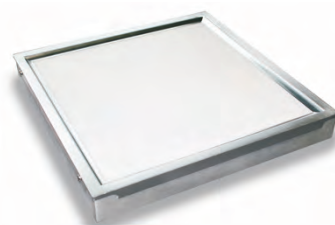
- Enables casting and running a gel in the buffer chamber
- Run 5 to 24 samples in 15 minutes
- The two comb slots on the UV Transmissible (UVT) gel tray double sample capacity by doubling the number of sample wells
- Heavy-duty, one-piece combs eliminate comb assembly
- UVT gel trays are silk screened with a fluorescent ruler for easy measurement of bands
- 8L x 7cmW (3.1 x 2.8 in.) gel size
- 16L x 10.5W x 9.5cmH (6.3 x 4.1 x 3.7 in.) footprint
- 400mL running buffer volume

Cat. No.	Description	Price
S98630	B1a EasyCast Mini Gel Electrophoresis System	566.00/Ea

## White Light Box

Safely enhance the visualization of DNA stained with FlashBlue™, proteins stained with Coomassie Blue and autoradiograms with the Edvotek White Light Box.

- Features a spacious 25 x 25cm (9.94 x 9.84 in.) viewing area
- Illuminated by long life LEDs
- Housed in a slim aluminum body
- Does not include an amber gel viewing filter
- Power Rating: 8 Watts
- Power Supply: uses external 110V power brick

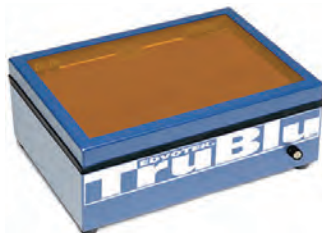


Cat. No.	Description	Price
S11552	White Light Box	199.00/Ea

## TruBlu™ Blue Light Transilluminator

For viewing DNA gels stained with SYBR™ Safe eliminating the need for UV light or ethidium bromide. Edvotek TruBlu Blue Light Transilluminator is optimized to fit Edvotek Gels and the high intensity control and orange lid ensure superior visualization.

- Developed in concert with the inventor of the technology under license from Clare Chemical Research, Inc
- Viewing Area: 14.5cm x 18 cm
- Optimized for Edvotek Gels
- Blue Light High Intensity Control
- Orange Contrast Lid
- Vivid results
- US Patent Nos. 6,198,107, 6,512,236, 6,914,250
- EP Patent No. 0 965 034
- Made in USA



Cat. No.	Description	Price
S42878	TruBlu Blue Light Transilluminator	362.00/Ea

## Midrange UV Transilluminator

Midrange (302nm) UV transilluminator designed to visualize DNA stained with ethidium bromide.

- UV filter 7 x 14cm (2.75 x 5.5 in.) in size
- Optimal for viewing almost every Edvotek experiment kit utilizing ethidium bromide (Edvotek standard gel size is 7 x 7cm [2.8 x 2.8 in.])
- Safety features include a UV-blocking cover and a power cut-off switch when cover is opened
- Also ideal for viewing gels stained with SYBR™ Safe



**WARRANTY:** Two years

Cat. No.	Description	Price
S97812	UV Transilluminator; Midrange (302nm)	869.00/Ea

## Long Wave UV Mini-Light

Used to detect hydrolysis of fluorescent substrate.

- Hand-held
- Also detects fluorescent *Artemia* and *Daphnia* after their ingestion
- Can also be used for observing fluorescence in Green (gfp) and Blue (bfp) fluorescent proteins



Cat. No.	Description	Price
S95133	UV Mini-light	56.00/Ea

## Classroom DNA Discovery LabStation™

Newly reengineered M36 Electrophoresis Apparatus features the latest in electrophoresis design and supports up to six groups of students.



**Includes the following:**

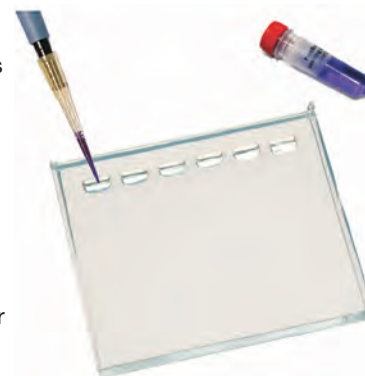
- 1 x Cat. #515 Edvotek™ M36 HexaGel Electrophoresis Apparatus (7 x 7 cm Trays (6))
- 1 x Cat. #507 Edvotek™ DuoSource™ 75 Power Supply
- 2 x Cat. #588 Fixed Volume MiniPipette™ 40 µL
- 1 x Cat. #636-1 Yellow Micropipet Tips 1 to 200 µL (1 Rack of 96 Tips)
- 1 x Cat. #S-51 Whose DNA Was Left Behind

Cat. No.	Description	Price
S72163	Classroom DNA Discovery LabStation™	499.00/Ea

## DNA DuraGel™

Designed for students to learn pipetting samples in agarose gels.

- DNA DuraGel™ gels are permanent polymer gels that allow students to practice the critically important skill of pipetting/gel loading.
- The clear, reusable gels are designed for the practice of loading 5 - 35 µl of samples.
- The gel grids are imprinted with a ruler for sizing DNA fragments. Also included are simulated FlashBlue™ and Ethidium Bromide gel images, ideal for representing how actual gels are stained with Methylene Blue and Ethidium Bromide.



Cat. No.	Device Holds	Includes	Price
S05711	6 Gels (12 to 24 Students)	6 Reusable DNA DuraGel™, 4 FlashBlue™ and 4 Ethidium Bromide gel images, practice gel loading solution and mini-transfer pipets	95.00/Ea

## Reagents for Electrophoresis

Cat. No.	Description	Price
S11601	Melt and Pour 0.8% UltraSpec-Agarose; 400mL	35.50/Ea
S11601B	Melt and Pour 0.8% UltraSpec-Agarose; 5 × 400mL	133.00/Ea
S11605	UltraSpec-Agarose; DNA Electrophoresis Grade, 20g	63.00/Ea
S11605B	UltraSpec-Agarose; DNA Electrophoresis Grade, 100g	201.00/Ea
S11607	Electrophoresis Buffer, 50X TAE (tris-acetate-EDTA), For 50L	39.00/Ea
S11609	FlashBlue™ Plus DNA Staining System; For 3L	24.75/Ea
S05678	SYBR™ Safe DNA Stain; 100µL dilutes to 750mL	196.00/Ea
S94619	Tris-Borate EDTA Buffer 5L	39.00/Ea





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ITS FULL OF LIFE

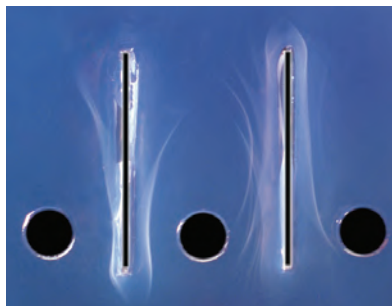
Visit [fisheredu.com/biotechnology](http://fisheredu.com/biotechnology) for the latest resources, products and training information.

### Immunology

## Immuno-electrophoresis Kit

Intermediate level experiment uses immuno-electrophoresis to separate and characterize a mixture of proteins.

- Experiment uses agarose gel electrophoresis
- No experiment components contain human serum.
- Lets students examine the specificity of the antigen-antibody interaction
- Identifies proteins based on their combined electrophoretic and immunological properties



#### INCLUDES:

- IgG
- Whole serum
- Albumin
- Antibody to whole serum
- Antibody to IgG
- UltraSpec-Agarose™
- Electrophoresis buffer (25X concentrate)
- 50 Microtest tubes
- Two 10mL pipets
- 20 Filter papers
- 10 Well cutters
- 10 60mm Petri plates

#### REQUIRES:

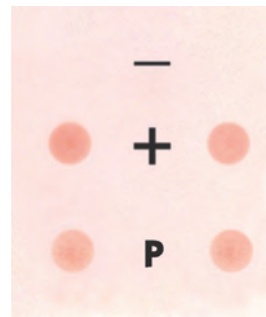
- Horizontal electrophoresis apparatus
- Power supply
- Automatic micropipet and tips (5-50µL)
- Waterbath (set to 55°C)
- Microscope slides (1 × 3 in.)
- Distilled water
- 400 to 600mL Beaker
- 1000mL Graduated cylinder
- Bunsen burner, hotplate, or microwave
- Container with lid (large enough to hold electrophoresis trays)
- Paper toweling
- Plastic wrap or foil
- 37°C Incubation oven

## Clinical Diagnostic Immunoblot

Demonstrates a sensitive immunological assay used in research and clinical laboratories to quantify protein antigens.

Clinical diagnostics kits employ the principles of the immunoblot (dot blot), a technique used to determine the presence of an antigen.

- In this experiment, students will prepare a dot blot membrane to determine the presence of an antigen
- Antigens are absorbed into a membrane that is then treated sequentially with an antigen-specific antibody solution and a secondary antibody conjugated to an enzyme
- The enzyme-substrate reaction generates a color product that precipitates on the membrane, indicating a positive reaction



#### INCLUDES:

- Antigen
- Antibody to antigen
- IgG-horseradish peroxidase conjugate
- Peroxidase substrate
- Hydrogen peroxide
- Substrate dilution buffer
- Tris buffered saline (pH 7.5)
- Instant nonfat dry milk
- Nylon membranes
- Petri dishes (60mm diameter)
- Complete instructions, background information and study questions

#### REQUIRES:

- Forceps
- Graph paper
- Rulers
- Scissors
- Shaking platform (optional)
- Distilled water

**ORDERING INFORMATION:**  
Class size: 10 groups.

Cat. No.	Description	Price
S90247ND	Immuno-electrophoresis Kit	171.00/Ea

Cat. No.	Description	Price
S96347	Clinical Diagnostics Immunoblot	171.00/Ea

## Lab-Aids™ Immunology and Evolution Experiments

Determine evolutionary closeness of organisms based on antigen - antibody blood analysis. Identify various animals in relation to mankind.

The focus of this highly motivating kit is on determining the evolutionary closeness of organisms based on antigen-antibody blood analysis. Why this topic is so fascinating? Because it is a basis for discussion about a very controversial topic: The Theory of Evolution.

Immunological comparison (homology) is probably the most fascinating of the five methods used to classify organisms. Using synthetic blood serum, students have the opportunity to see textbook theory come alive in a dramatic lab exercise. As the students observe the immunological differences, they identify various animals' relationships to humans.

With this kit, students learn first-hand about relationships among organisms, common ancestry, even the identification of blood from unknown sources and techniques of blood immunology. Accommodates 2 classes, each with 12 groups of 2 students. Includes teacher guide, student sheets, assessment questions and SDS for all chemicals included.

### INCLUDES:

- 12 Chemplates with spatula
- Three each of drop-controlled bottles of synthetic rabbit blood serum and synthetic human blood serum
- Two each of drop-controlled bottles of blood serum test I, II, III, IV, and V
- 30 Student worksheets and guides



Cat. No.	Description	Price
S19412	Immunology and Evolution Experiments	120.00/Ea

## Southern Blot Analysis For DNA Fingerprinting

Advanced-level experiment for DNA fingerprinting.

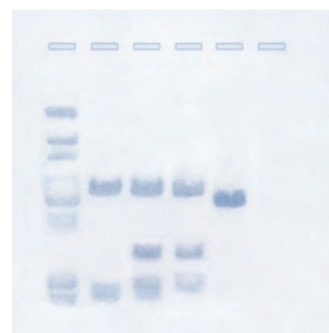
This experiment introduces your students to Southern blotting as a tool for "DNA Fingerprinting" in a hypothetical paternity determination. DNA fragments are first separated by agarose gel electrophoresis, then transferred to a nylon membrane and finally visualized by staining.

### INCLUDES:

- Instructions
- DNA samples for electrophoresis
- Practice gel loading solution
- UltraSpec-Agarose™
- Electrophoresis buffer, pipets
- 5 pre-cut nylon membranes
- 5 pre-cut blotting filter papers
- Blue-Blot DNA Stain™

### REQUIRES:

- Horizontal gel electrophoresis apparatus
- DC power supply
- Waterbath (65°C)
- Visualization system (white light)
- Staining tray and net
- NaCl, NaOH, concentrated HCl
- 250mL beakers or flasks
- 10mL glass graduated cylinder



- 100mL graduated cylinder
- Distilled or deionized water
- Microwave, hot plate, or Bunsen burner
- Small plastic box or tray forceps

Cat. No.	Description	Price
S11207	Southern Blot Analysis For DNA Fingerprinting	157.00/Ea

## Western Blot Analysis, Polyacrylamide-Based

In Western Blot analysis, protein identification is based on antibody and antigen reactions.

- Proteins are separated on a polyacrylamide gel and are transferred (blotted) to a nylon membrane
- Membrane is exposed to solutions containing primary antibody, followed by a secondary antibody coupled to an enzyme
- Membrane is then soaked in a substrate solution to develop the color reaction to identify the antigen protein band
- Molecular weights of the visible bands are measured using prestained protein markers of known molecular weight

### Experiment times:

- Electrophoresis, one hour
- Blot, overnight
- Detection, two hours and 30 minutes

### REQUIRES:

- Three polyacrylamide gels (12%)
- Vertical gel electrophoresis apparatus
- Power supply
- Automatic micropipet with fine tips
- Laboratory glassware
- Metric rulers
- Distilled or deionized water
- Glacial acetic acid
- Methanol

### INCLUDES:

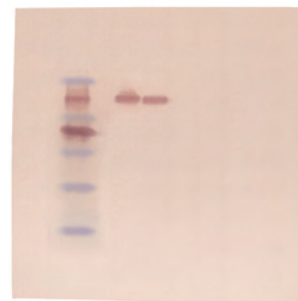
- Instructions
- Negative control
- All samples and antibodies
- Various reagents and buffers
- Membrane and filter paper

Kit does not require an electrotransfer apparatus.

### ORDERING INFORMATION:

Contains materials for six blots.

Cat. No.	Description	Price
S90257	Western Blot Analysis, Polyacrylamide-Based	257.00/Ea



## AIDS Kit II: Simulation of HIV Detection by Western Blot

Provides a comprehensive introduction to the molecular biology and pathogenesis of AIDS.

- Separate protein samples using horizontal agarose electrophoresis
- Samples are transferred to a membrane and detected by staining
- Demonstrate the concepts and methodology involved with Western blots

### Instructor's Guide provides:

- Pre-lab preparations and common pitfalls to avoid
- Answers to study questions and MSDS sheets

**Does not contain HIV or its derivatives. No components have been prepared from human sources.**

### INCLUDES:

- Instructions
- Samples
- Standard molecular weight markers
- Protein agarose
- Various buffers and reagents
- PVDF membrane
- Filter paper
- Stain
- 1 mL pipet
- 100 mL graduated cylinder

### REQUIRES:

- Horizontal gel electrophoresis apparatus
- Hotplate, micropipets, incubation oven and shaker platform
- All necessary safety equipment
- Isopropanol, glacial acetic acid and distilled water



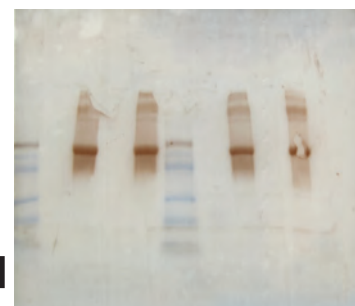
Cat. No.	Description	Price
S66751	HIV Detection By Western Blot	171.00/Ea

## Detecting Risk Factors for Alzheimer's Disease Using Western Blot Kit



Helps students to understand the theory and application of western blotting. Students will perform a western blot to determine simulated clinical trial participants' risk of developing Alzheimer's Disease.

- Storage: Some Components Require Refrigerator Storage
- For 6 Lab Groups, With 2 Groups Sharing a Gel



Cat. No.	Description	Price
S27562	Detecting Risk Factors for Alzheimer's Disease Using Western Blot Kit	239.00/Ea

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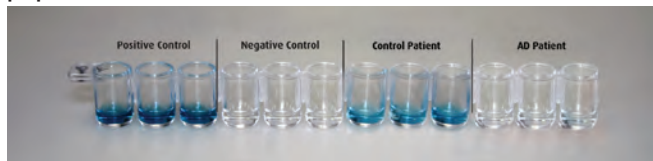
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## Researching Alzheimer's Disease by ELISA Kit



Students will become neuroscientists searching for Alzheimer's Disease biomarkers. Explores potential biomarkers by analyzing simulated patient samples from control and Alzheimer's Disease populations.



- Storage: Some Components Require Refrigerator Storage
- Completion Time: 1 Class Period
- For 10 Lab Groups

Cat. No.	Description	Price
S27563	Researching Alzheimer's Disease by ELISA Kit	119.00/Ea

## Introduction to ELISA Reactions Kit

Teaches students the concepts of the Enzyme Linked Immunosorbent Assay (ELISA).

- Determine the reaction steps of ELISA — a precise and sensitive antibody-based detection method for antigens such as bacterial and viral proteins
- Perishable items shipped separately



No components have been prepared from human sources.

### ORDERING INFORMATION:

Class size: 10 lab groups.

### INCLUDES:

- Antigens
- Primary antibody, Anti-IgG-peroxidase conjugate (secondary antibody)
- Stabilized hydrogen peroxide
- Peroxide co-substrate, ABTS substrate
- Phosphate buffered saline concentrate
- Two microtiter plates
- Transfer pipets Microtest tubes with attached caps, 15mL plastic tubes

### REQUIRES:

- Distilled or deionized water
- Beakers
- 37°C incubation oven
- Disposable lab gloves
- Safety goggles
- Automatic micropipets (0 to 50µL) and tips recommended

Cat. No.	Description	Price
S90245ND	ELISA Reactions Kit	171.00/Ea

## Quantitative ELISA Laboratory Activity

Antibodies are highly specific in their recognition of antigens.



- ELISA experiment demonstrates the quantification of varying concentrations of viral antigens as detected by the intensity of the color reaction due to the accumulation of products
- Meets the requirements in the BSCS Blue Biology curriculum
- Complete in two hours

### All You Need:

- distilled or deionized water
- 37° C incubation oven
- automatic micropipets with tips
- laboratory glassware

### ORDERING INFORMATION:

For six lab groups.

### INCLUDES:

- Instructions
- Antigens
- Primary and secondary antibodies
- Substrate solution
- Phosphate buffered saline
- Blocking agent
- Stop solution
- Tubes
- Plates
- Transfer pipets

### REQUIRES:

- Distilled or deionized water
- 37°C incubation oven
- Automatic micropipets with tips
- Laboratory glassware

Cat. No.	Description	Price
S05654	Quantitative ELISA Laboratory Activity	171.00/Ea



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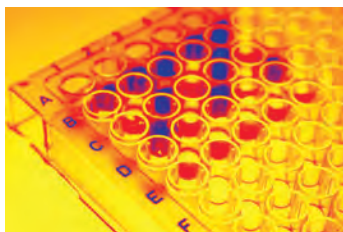
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## ImmunoTag™ Human HCY (Homocysteine) ELISA Kit

A Competitive ELISA Kit for the detection of Human HCY.

The ImmunoTag™ Human HCY (Homocysteine) ELISA is based on a sandwich enzyme-linked immunosorbent assay (ELISA) technology. A 96-well plate is coated with a specific antibody against the protein of interest



(HCY). During the reaction, HCY in the sample or standard competes with a fixed amount of HCY on the plate for sites on the Biotinylated Detection Antibody specific to HCY, which will bind the protein and this is detected by a biotin conjugated antibody against the protein of interest. The biotin moiety is subsequently detected, following washing, by the addition of streptavidin coupled horseradish peroxidase (HRP). The supplied TMB substrates were used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is directly proportional to the concentration of protein of interest captured on the plate.

Quality Assurance: Due to their limited shelf life, the ImmunoTag™ ELISA kits are not typically stocked as finished goods. Please allow 2-3 weeks for delivery. Upon receipt of an order each kit is assembled and tested to ensure that it meets specifications before shipping. Minor changes may occur to the Range, Sensitivity, and Precision and is reflected in the manual supplied with the kit (online manuals are for reference only). In the event of a significant change the order would be confirmed with the customer before shipping

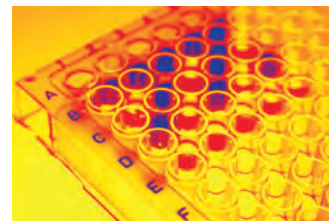
- Quantity: 1 x 96-well plate

Cat. No.	Description	Price
50-148-5730	Human HCY (Homocysteine) ELISA Kit	575.00/Ea

## ImmunoTag™ Mouse sEPCR (Soluble Endothelial Protein C Receptor) ELISA Kit

A Sandwich ELISA Kit for the detection of Mouse sEPCR.

The ImmunoTag™ Mouse sEPCR (Soluble Endothelial Protein C Receptor) ELISA is based on a sandwich enzyme-linked immunosorbent assay (ELISA) technology. A 96-well plate is coated with a specific antibody against the protein of interest (sEPCR), which will bind the protein and this is



detected by a biotin conjugated antibody against the protein of interest. The biotin moiety is subsequently detected, following washing, by the addition of streptavidin coupled horseradish peroxidase (HRP). The supplied TMB substrates were used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is directly proportional to the concentration of protein of interest captured on the plate.

Quality Assurance: Due to their limited shelf life, the ImmunoTag™ ELISA kits are not typically stocked as finished goods. Please allow 2-3 weeks for delivery. Upon receipt of an order each kit is assembled and tested to ensure that it meets specifications before shipping. Minor changes may occur to the Range, Sensitivity, and Precision and is reflected in the manual supplied with the kit (online manuals are for reference only). In the event of a significant change the order would be confirmed with the customer before shipping

- Quantity: 1 x 96-well plate

Cat. No.	Description	Price
50-148-7467	Mouse sEPCR (Soluble Endothelial Protein C Receptor) ELISA Kit	575.00/Ea

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## PCR, CRISPR, and Bioengineering

## Quick PCR

Lets students gain hands-on experience in the principles and practice of the Polymerase Chain Reaction (PCR).

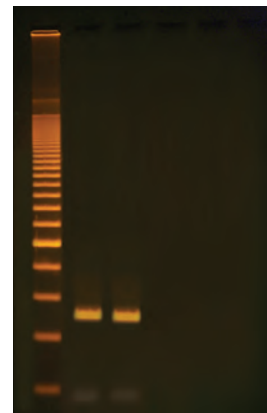
- Experiment uses a set of primers and lambda DNA template in a time-saving two-step process
- Allows lab to be completed in one session
- Does not contain human DNA.

### ORDERING INFORMATION:

Class size: 10 lab groups.

### INCLUDES:

Instructions, PCR EdvoBeads™, LyphoPrimer™ Mix, EdvoQuick™ DNA Ladder, LyphoTemplate™ Lambda DNA, TE Buffer, UltraSpec-Agarose™, Electrophoresis Buffer (50X), 10X Gel Loading Solution, InstaStain™ Ethidium Bromide, FlashBlue™ Stain, Microcentrifuge & PCR Tubes, & Wax Beads



Cat. No.	Description	Price
S96378	Quick PCR	227.00/Ea

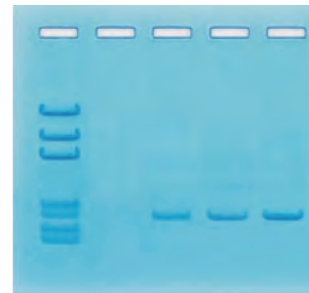
## Amplification of DNA by PCR

Easy PCR experiment, students will make billions of copies of a small amount of DNA.

In this easy PCR experiment, students will make billions of copies of a small amount of DNA in just 90 minutes! They will just need to mix template DNA & primers with PCR beads that contain all of the other components required to carry out a PCR reaction. Students will see the increasing amounts of DNA for themselves, taking samples every few cycles and analyzing them on a DNA gel.

### INCLUDES:

Instructions, PCR EdvoBeads™, LyphoPrimer™ Mix, DNA Standard Marker, Ultra-pure Water, LyphoTemplate™, TE Buffer, UltraSpec-Agarose™, 50X Electrophoresis Buffer, 10X Gel Loading Solution, FlashBlue™ Stain, InstaStain™ Ethidium Bromide, Microcentrifuge & PCR Tubes, Wax Beads



Cat. No.	Description	Price
S11330	DNA amplification by PCR	211.00/Ea

## Exploring the Genetics of Taste: SNP Analysis of the PTC Gene Using PCR Experiment Kit

To identify the presence of the single nucleotide polymorphism (SNP) in an amplified segment of the PTC gene that links detection of the characteristic taste of PTC paper. Exploring the Genetics of Taste: SNP Analysis of the PTC Gene Using PCR Experiment Kit includes 5 modules.

### Five Modules Includes:

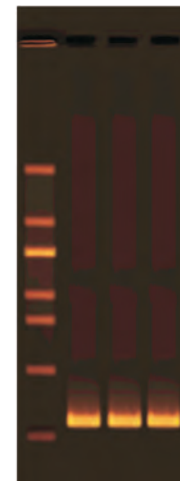
- Extraction of DNA from buccal cells
- Amplifying the segment that contains the polymorphic nucleotide
- Digestion of the amplified fragment with the restriction enzyme that recognizes the SNP
- Analysis by gel electrophoresis
- Tasting the PTC paper to confirm the results obtained
- For 25 reactions
- Complete in 3 hrs. 30 min.
- Level: Advanced
- Requires wet ice shipment for next day delivery

### INCLUDES:

Instructions, PCR EdvoBeads™, Universal DNA Buffer, TE Buffer, LyphoPrimer™ Mix, LyphoTemplate™ Control DNA, Dryzymes™ Restriction Enzyme HaeIII, Restriction Enzyme Dilution Buffer, 100 bp Ladder, Proteinase K, PTC Paper, Control Taste Paper, UltraSpec-Agarose, Electrophoresis Powder Buffer, InstaStain™ Ethidium Bromide, Disposable plastic cups, 15 ml Conical Tube, Snap-top microcentrifuge tubes, microcentrifuge tubes (1.5 ml screw-cap), 0.2 ml PCR tubes, wax beads, and salt packets

### REQUIRES:

Thermal cycler, electrophoresis apparatus, power supply, automatic micropipet, microwave or hot plate, waterbath, UV transilluminator.



Cat. No.	Description	Price
S29018	Exploring the Genetics of Taste: SNP Analysis of the PTC Gene Using PCR Experiment Kit	256.00/Ea

## DNA Fingerprinting by PCR Amplification

Demonstrates the utility of DNA amplification in forensics.

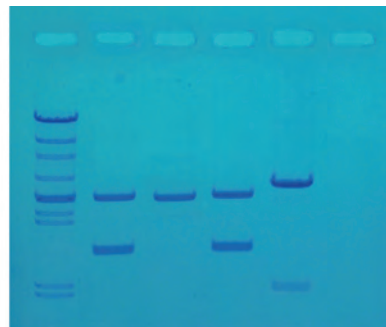
- Forensic DNA fingerprinting has become a universally accepted crime-fighting tool. Recent advances use the Polymerase Chain Reaction (PCR) to amplify human DNA obtained from crime scenes
- Develop a basic understanding of DNA fingerprinting
- Experiment is based on a crime scene scenario and has an inquiry-based component
- Enables varied results depending on the selection of DNA fingerprinting patterns
- Students analyze PCR reactions obtained from different suspects and compare them to a crime scene sample
- Does not contain human DNA
- For 8 Gels (5 lanes each) with InstaStain Methylene Blue

### INCLUDES:

Instructions, Ready-to-Load QuickStrip™ DNA Samples, UltraSpec-Agarose™, Electrophoresis Buffer (50X), 10X Gel Loading Solution, FlashBlue™ DNA Stain, InstaStain™ Blue Cards, & Disposable Pipets

### REQUIRES:

Horizontal gel electrophoresis apparatus; DC power supply; Automatic micropipets with tips; Balance; Microwave, hot plate or burner; Pipet pump; 250mL flasks or beakers; Hot gloves; Safety goggles and disposable laboratory gloves;



Small plastic trays or large weigh boats (for gel destaining); DNA visualization system (white light); Distilled or deionized water

Cat. No.	Description	Price
S94607	DNA Fingerprinting by PCR Amplification	117.00/Ea

## PCR-Based DNA Typing

DNA typing adapted from FBI technology.

Safe experiment for classroom use to demonstrate DNA fingerprinting.

### Alu-Human DNA Typing (S66823)

- Examine students' DNA for an Alu element on Chromosome 16
- Investigate DNA patterns
- Compare Alu genotypes with those of their classmates

### VNTR Human DNA Typing (S66824)

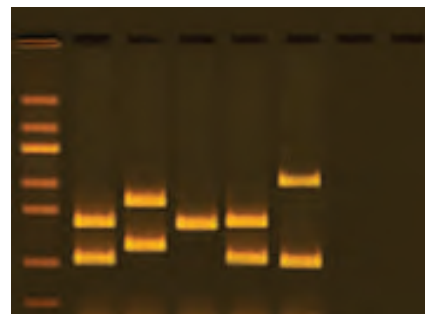
- Use PCR to fingerprint students' DNA at the D1S80 locus on Chromosome 1
- Provide an example of the variable number of tandem repeat (VNTR) polymorphism

### INCLUDES:

- Supplies for 25 individual reactions and six gels
- Complete instructions
- Background information
- Study questions

### REQUIRES:

- Thermal cycler
- Horizontal gel electrophoresis apparatus
- Microcentrifuge
- Automatic micropipets
- UV transilluminator



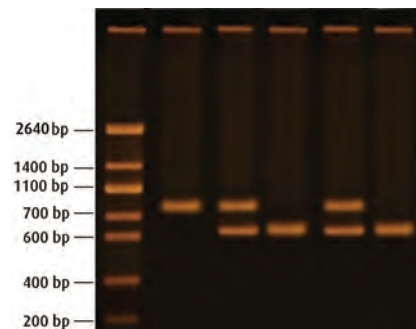
- 500mL flasks
- Glassware
- All necessary safety equipment
- Ice
- Ice bucket
- Distilled or deionized water

Cat. No.	Description	Price
S66824	VNTR Human DNA Typing	263.00/Ea
S66823	Alu-Human DNA Typing	263.00/Ea

## Diagnosing Huntington's Using PCR

Students will conduct a DNA fingerprinting exercise on simulated patient samples to determine if family members are heterozygous or homozygous for Huntington's Disease. Amplified DNA segments are then analyzed by agarose gel electrophoresis.

- Storage: Some Components Require Freezer Storage
- Sufficient for 5 complete sets of reactions



Cat. No.	Description	Price
S27564	Diagnosing Huntington's Using PCR	175.00/Ea

## Identification of Genetically Modified Foods Using PCR

Certain foodstuffs, such as tofu and soy milk, contain raw materials from genetically modified organisms (GMOs).

Some foods contain raw materials from genetically modified organisms (GMO). Examples include tofu, corn flakes and corn meal. In this experiment, your students will extract DNA from food or plant material and perform PCR to determine if any GM indicator genes are present. Amplified DNA is separated and sized by agarose gel electrophoresis.

### ORDERING INFORMATION:

Class size: 10 groups.

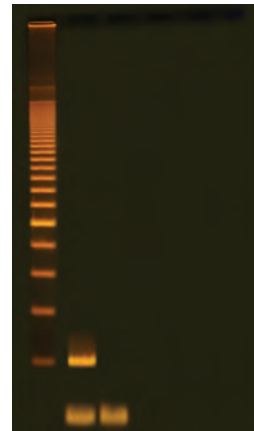
### INCLUDES:

Instructions, PCR EdvoBeads™, Universal DNA Buffer, TE Buffer, LyphoPrimer™ Mix, GMO Positive LyphoControl™, NaCl Solution, DNA Extraction Buffer, 100 base pair ladder, Proteinase K,

UltraSpec-Agarose™, TBE Electrophoresis Buffer Powder, SYBR™ Safe Stain, 0.2 mL PCR Tubes, Plastic Micropestles, Transfer Pipets, and Snap-top Microcentrifuge Tubes

### REQUIRES:

- Thermal cycler or three water baths
- Horizontal gel apparatus
- DC power supply
- Microcentrifuge
- Balance
- Microwave oven or hotplate
- UV transilluminator
- Pipetter

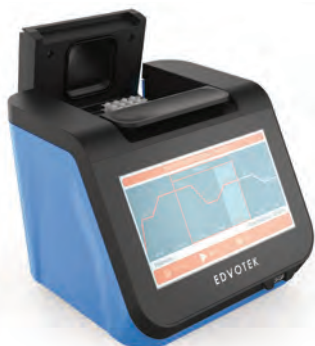


Cat. No.	Description	Price
S68638	PCR-based Identification of Foodstuffs from Genetically Modified Organisms Kit	256.00/Ea

## EdvoCycler™ Jr.

EdvoCycler™ Jr. offers superior performance and ease-of-use in a sleek form factor with a vivid touchscreen display.

- Easy to use and program
- Holds 16 x 0.2 ml PCR Samples and 8-Tube Strip Compatible
- 7 inch HD Color Touchscreen Displays Real-Time Cycling Data
- Edvotek PCR Programs Included + Storage for 100 More
- Standalone Machine - No PC or Smartphone Required
- High Precision Algorithm Yields Superior Results
- Heated Lid Prevents Sample Evaporation
- Active Cooling to 4°C
- Instant Incubate Function
- Temperature Range: 4 to 99°C
- Maximum Ramp Rate: 4°C
- 110V 50/60Hz
- 2 Year Warranty
- Made in USA



Cat. No.	Description	Price
S72162	EdvoCycler™ Jr.	672.00/Ea

## Classroom PCR Discovery LabStation™

A versatile package suited to run the full spectrum of horizontal electrophoresis experiments.



### Includes the following:

- 6 x Cat. #502/504 M12 Complete™ Package (7 x 14 cm Tray & 7 x 7 cm Trays (2)
- 3 x Cat. #509 DuoSource™ 150 (75/150 V, for 1 or 2 units)
- 6 x Cat. #590 Variable Micropipette (5 to 50 µL)
- 2 x Cat. #534 Piccolo Microcentrifuge
- 1 x Cat. #541-542 EdvoCycler™ 2 (48 x 0.2 mL)
- 1 x Cat. #557 TruBlu™ Blue Light Transilluminator (14.5 x 18 cm viewing surface)
- 1 x Cat. #539 1.8 L Water Bath

Cat. No.	Description	Price
S72164	Classroom PCR Discovery LabStation™	4987.00/Ea



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## Classroom PCR LabStation™

Supports up to 25 students.



### INCLUDES:

- Six M12 electrophoresis apparatus (7x14cm and 7x7cm trays)
- Three Edvotek DuoSource™ 150 power supplies (75/150V, for one or two units)
- Six variable micropipets (5 to 5µl)
- Two Piccolo Microcentrifuges
- One EdvoCycler™ (25 x 0.2 mL)
- One TruBlu™ Blue Light Transilluminator
- One 1.8 L Digital Water Bath

Cat. No.	Description	Price
S05705	Classroom PCR LabStation	6429.00/Ea

## CRISPR 3-D Model Kit

Assemble and use 3-D models to visualize and investigate key science structures.



- Gain a critical understanding of complex structures & processes through the assembly of 3-dimensional models
- Kit includes enough materials for students to assemble up to 10 paper models by working either independently or cooperatively in small groups
- Also includes comprehensive Teacher Resource Guide outlining opportunities for your students to Engage, Explore, Explain, Extend & Evaluate their understanding of key Scientific concepts
- Satisfies NGSS Standards which encourage students to develop & use models to represent structures, systems & processes, then provide explanations, make predictions or investigate solutions
- Perfect for use in the classroom, lab or at home



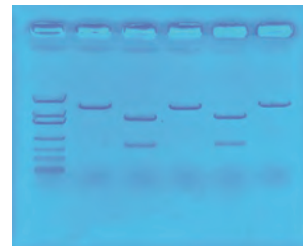
Cat. No.	Description	Price
S81449	CRISPR 3-D Model Kit	38.00/Ea

## Using CRISPR to Treat Cystic Fibrosis Kit



Simulate the use of CRISPR-Cas9 to target a genetic mutation found in a patient suffering from Cystic Fibrosis. Students will develop an understanding of guide RNA (gRNA) design, and use agarose gel electrophoresis to examine pre-prepared DNA samples after CRISPR treatment.

- Storage: Room Temperature Stable
- Refrigerator Storage of Ready-to-Load QuickStrip™ samples is recommended
- Suitable for 8 Gels
- Expected Time: 45 minutes



Cat. No.	Description	Price
S27552	Using CRISPR to Treat Cystic Fibrosis Kit	113.00/Ea

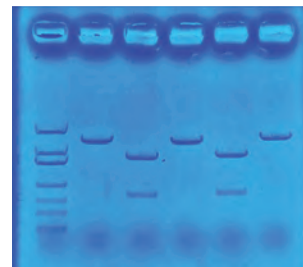
## A-maize-ing Editing: Using CRISPR to Improve Crops Kit



Students will assume the role of plant geneticists working to develop corn crops capable of thriving in a changing environment.

This experiment will allow students to develop an understanding of CRISPR-Cas9 applications, cleave DNA, and examine results after gel electrophoresis.

- Some Components Require Freezer Storage Upon Receipt
- Sufficient for 8 Gels
- Time Range: 80 min. to 105 min.



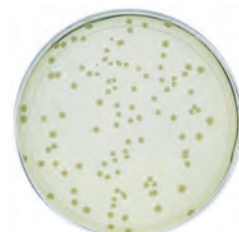
Cat. No.	Description	Price
S27553	A-maize-ing Editing: Using CRISPR to Improve Crops Kit	140.00/Ea

## Hack the Planet: Using CRISPR to Terraform Mars Kit



Simulate the use of CRISPR-Cas9 to modify bacterial DNA, which will then be transformed into auxotrophic E. coli that are incapable of surviving on the Martian surface. Only bacteria that receive the successfully edited DNA can survive, thrive, and help to terraform Mars!

- Storage: Some Components Require Freezer Storage Upon Receipt
- Time Range: Three 1 hr. Modules
- For 5 Groups



Cat. No.	Description	Price
S27554	Hack the Planet: Using CRISPR to Terraform Mars Kit	199.00/Ea

## Engineer And Explore Your Own Enteric Coated Drugs

Students will learn the basic structures and pathway of the digestive system, understand the functions of the stomach and small intestine in regards to digestion, and investigate how the properties of different enteric coatings react in different sections of the digestive system.

- Students explore the purpose of an enteric coating and engineer a simulated coating most suitable for certain pharmaceutical needs.
  - Materials for 15 groups
  - Includes Teacher's manual and student guide
  - Aligned to the Next Generation Science Standards (NGSS)
  - Disciplinary Core Ideas: ETS1.A; ETS1.B; LS1.A; ETS1.C
  - Performance Expectations: MS-LS1-3; MS-LS1-7; MS-ETS1-1; MS-ETS1-2; MS-ETS1-3; MS-ETS1-4; HS-LS1-2; HS-ETS1-2
  - Cross Cutting Concepts: Energy and Matter; Influence of Science, Engineering and Technology on Society and the Natural World; Systems and System Models
- Engineering Practices: Developing and Using Models; Asking Questions and Defining Problems; Analyzing and Interpreting Data; Engaging in Argument From Evidence; Constructing Explanations and Designing Solutions

### ⚠️ ALERTS:

**WARNING: This product can expose you to chemicals including Acetyl Salicylic Acid/Aspirin, which is known to the State of California to cause birth defects and reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**

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Cat. No.	Description	Price
S40764	Engineer And Explore Your Own Enteric Coated Drugs	49.50/Ea

## Engineering a Drug Delivery System Kit

Innovating Science™ Engineering a Drug Delivery System Kit teaches students about the importance of drug delivery by testing simulated delivery systems in environments that mimic different parts of the body.



- Biomedical engineers design devices, equipment, and processes to improve medical treatment methods, the quality of human health, and life
- They apply engineering principles to biology and medicine to create products such as prosthetic limbs and artificial organs, among others
- One major focus of biomedical engineers is the design of drug delivery systems, which can control the transport and release of medicine in the body to more effectively treat diseases and illnesses
- In this experiment, students will gain an understanding of drug delivery and its importance by testing simulated delivery systems in multiple environments that mimic different parts of the body
- The delivery systems will be analyzed and compared, allowing students to engineer an optimal solution
- Students will learn what properties must be considered when designing new drug delivery systems
- This lab has enough materials for 15 lab groups
- Teacher's manual and student guide are included



Cat. No.	Description	Price
S27126	Engineering a Drug Delivery System Kit	66.50/Ea

## Engineer and Explore Materials for Prosthetics Kit

Innovating Science™ Engineer and Explore Materials for Prosthetics Kit investigates materials that biomedical engineers use when creating prosthetic devices. Students identify the physical properties of various metals, ceramics, and polymers to determine which are most suitable for use.



- In this lab, students will explore the materials that biomedical engineers use when creating prosthetic devices
- They will first investigate the physical properties of various metals, ceramics, and polymers to understand how they differ
- Then, they will determine which materials would be most suitable for use in a hip replacement prosthetic
- Students will then engineer their own prosthetic arm that meets certain design requirements and mimics the functionality of a real hand
- Kit contains enough materials for 15 groups
- Teacher's Manual and Student Study Guide copy masters are included

**⚠️ ALERTS:**  
**WARNING: CHOKING HAZARD, Children under 8 yrs. can choke or suffocate on uninflated or broken balloons. Adult supervision required. Keep uninflated balloons from children. Discard broken balloons at once.**



### DISCLAIMERS:

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Cat. No.	Description	Price
S27127	Engineer and Explore Materials for Prosthetics Kit	327.00/Ea

## Biomaterials To Make Your Own Contact Lenses

Engineers play an integral role in finding a ratio of materials to maximize the desired properties and decrease the negative effects of other properties. Students will engineer a lens using 2 different materials

- Determine the correct material and the concentration that has similar properties as a contact lens, while discovering the correct optical properties, tensile strength and hydrophobicity.
- A hydrogel is a polymer like plastic, which has favorable optical properties and favorable flexibility/strength but like paper and glasses/ceramics is hydrophilic, which is necessary for a contact lens to function properly.
- Aligned to the Next Generation Science Standards (NGSS)
- Disciplinary Core Ideas: ETS1.A; ETS1.B; ETS1.C; PS1.A
- Performance Expectations: MS-ETS1-1; MS- ETS1-3; MS- ETS1-4; HS-PS1-3; HS-ETS1-2
- Cross Cutting Concepts: Influence of Science, Engineering and Technology on Society and the Natural World; Patterns
- Engineering Practices: Asking Questions and Defining Problems; Analyzing and
- Interpreting Data; Constructing Explanations and Designing Solutions; Planning and Carrying Out Investigations
- Size: 12.12 x 9.25 x 6.5 in. (L x W x H)

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Cat. No.	Description	Price
S40765	Biomaterials To Make Your Own Contact Lenses	60.50/Ea



## STEM Investigations: Design a Biodegradable Plastic Kit



Innovating Science™ Stem Investigations: Design a Biodegradable Plastic Kit looks at engineers who are developing bioplastics that break down quickly, and produce less harmful byproducts. In this lab, students make samples of bioplastics to study how composition affects physical properties.



- Hundreds of millions of tons of plastic are produced each year and used for a variety of products, from packaging to automobiles
- The majority of these products are disposable items, leading to excessive amounts of plastic being discarded into landfills and the oceans
- Due to the major threat this poses to the environment, scientists and engineers are developing bioplastics that break down more quickly, and produce less harmful byproducts than traditional plastics
- In this activity, students will make samples of different bioplastics to study how composition affects their physical properties
- They will then use what they have learned to create a bioplastic that could be used to replace PET plastic in disposable water bottles
- Additionally, students will design an experiment to compare the biodegradability of their bioplastic samples to a traditional plastic
- Kit contains enough materials for 15 groups
- Teacher's Manual and Student Study Guide copy masters are included

Cat. No.	Description	Price
S27128	Investigations: Design a Biodegradable Plastic Kit	96.00/Ea

## Lab-Aids™ Organically Grown? Testing for Simulated Pesticide Residue



Chemical test designed to determine whether fruit samples have been treated for any simulated pesticides.



In this investigation, students will use a chemical test in order to determine whether fruit samples have been treated for any simulated pesticides. Based on their test results they grapple with the further question of which sample(s) could potentially be marketed as organic. Accommodates one class with 8 groups of 4 students.

### Science Concepts:

- Pesticides, chemicals used to control insects and other pest organisms, are used in production agriculture.
- All pesticides must be approved by the USDA.
- Low levels of pesticide can be detected using chemical tests
- Organic production uses several classes of pesticides approved by the USDA

### INCLUDES:

- 75 pieces of dried apple
- 80 small plastic tasting cups
- 8 stir sticks
- 4 dropper bottles of Pesticide 1 indicator
- 4 dropper bottles of Pesticide 2 indicator
- 4 dropper bottles of Pesticide 3 indicator
- 1 60 mL bottle of Pesticide Solution A (for preparing Apple A samples)
- 1 60 mL bottle of Pesticide Solution B (for preparing Apple A samples)
- 1 60 mL bottle of Pesticide Solution C (for preparing Apple A samples)
- 32 Student Worksheet and Guides
- 1 Teacher's Guide
- 1 SDS (Safety Data Sheet) packet

Cat. No.	Description	Price
S27119	Organically Grown? Testing for Simulated Pesticide Residue	169.00/Ea

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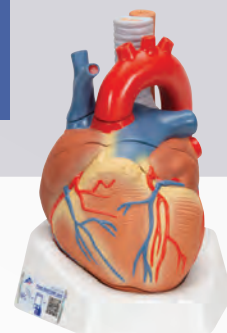
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