LaMotte

2016
Environmental Science Education Products

Field | Classroom | Outdoor Monitoring | Home School

InnovationsInside

SMART 3 Colorimeter

The user-friendly waterproof SMART3 Colorimeter is the direct reading colorimeter for complete on-site water analyses. See page 41

Air Microbe Hunter Activity

Predict which environmental conditions are favorable to airborne microbes and then propose and carry out a strategy to collect airborne microbes using passive sampling techniques. See page 23

Shipping Codes & Weight

Shipping codes and weights for shipping are included in this catalog for your convenience. The shipping code will refer to one of the following in the chart below. Weights will be in pounds and enclosed in [ ].

NH	Non Hazardous · No Fees
R1	Small Quantity · Hazardous Materials · No Fees
HF	Hazardous Materials · Air & Ground Fees
R2, R3, LQ	Hazardous Materials · Air Fees Only

Surface Microbe Hunter Activity

Discover factors that influence the growth and removal of surface microbes, design and evaluate cleaning protocols, and compare the effectiveness of anti-microbial materials. See Page 23

Aquaponics

Growing rapidly as a hobby and an industry as the farm-to-table trend continues to spread, this aquaponics kit is designed for small to mid-size systems. Monitor basic water quality for both the aquaculture and hydroponics segments of your system. See page 47

Phosphate Test Strips

Phosphorus is a nutrient that acts as a fertilizer for aquatic plants. When nutrient levels are high, excessive plant and algae growth create water quality problems. The LR Phosphate strips provide quick results in the field. See page 21

AP is a trademark of the College Entrance Examination Board, which does not imply endorsement of these products.

Meets GLOBE protocol.

WARNING: Products in this catalog are not toys. Adult supervision is strongly recommended. Products may contain ingredients which require additional safety precautions; refer to all safety guidelines and Safety Data Sheets at www.lamotte.com.

LEAD (Pb) weights are used in some water samplers and hydrometers. Weights should not be handled by children under 14. Adult supervision recommended.

TESTMETHODS

Colorimetric

Colorimetric means to measure color. Reagents are added to a sample resulting in a reaction that produces a color, the intensity of which is related to the concentration of the test factor. The test factor concentration is then determined by measuring the color, either visually or electronically.

Visual Methods

Octa-Slide 2 and Low Range Comparators feature eight color standards with built-in filters that eliminate optical distortion. Laminated color charts offer an inexpensive means of measuring color, and are often used with tablet methods and test strips.

Electronic Methods

Electronic colorimeters or spectrophotometers help eliminate visual inconsistencies and provide a dedicated light source. The light source passes through a sample and is then measured by a photodetector. The results are translated to a digital output in ppm, mg/L, FTU, %T or Absorbance.

Titrimetric

Titrimetric analyses are conducted by adding a solution of known strength (the titrant) to a specific volume of a sample in the presence of an indicator. The indicator produces a color change, which shows that the reaction is complete.

Direct Reading Titrator

The Direct Reading Titrator is a 1.0 mL microburet calibrated to allow direct reading of test results. Each titrator has a specific range, but may be refilled to test higher concentrations.

Dropper Bottle/Pipet

A pipet or special dropper tip fitted onto the reagent bottle is used to deliver a consistent standard drop size. The number of drops used to complete the reaction in the treated sample is multiplied by a given factor to produce the test result.

Electronic Meter/Probe

Electronic methods generally use a special electrode for measuring a specific test factor. An electrode is immersed into a sample, and an amplified current or voltage is produced and translated into a digital readout. In a colorimeter, light is passed through a sample and measured by a photodetector.

Octa-Slide 2

Low Range Comparator


Direct Reading Titrator

Dropper Bottle

Color Chart

Test Strips

Safety

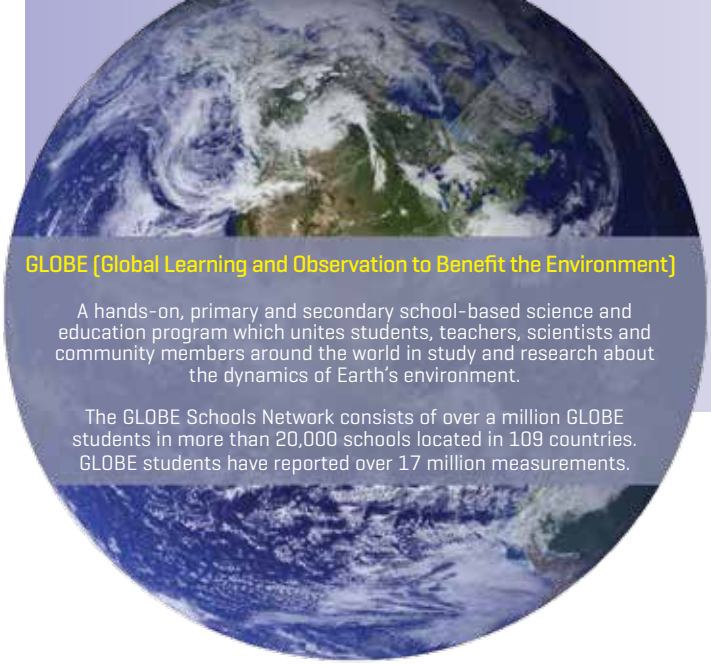
Have questions about the use of any LaMotte testing or sampling product? Call LaMotte's knowledgeable Technical Service Department at 800-344-3100 or send an email to tech@lamotte.com. Follow all field and laboratory safety guidelines as mandated by your school, center, or education/citizen monitoring program. Specific instructions are provided with each LaMotte test kit and sampling equipment. Be sure to follow these carefully.

Some reagents (or specific volumes of reagents), as determined by federal and state government safety and regulatory agencies, require access to a Safety Data Sheet. To view or print a SDS for these reagents go to www.lamotte.com. To obtain a printed copy contact us by email, phone or fax. Follow all safety precautions and procedures as specified on the SDS.

Additional information for all LaMotte reagents is available in the United States, Canada, Puerto Rico, and the US Virgin Islands from Chem-Tel by calling 1-800-255-3924. For all other areas, call 813-248-0585 collect to contact Chem-Tel's International access number. Each reagent can be identified by the 4-digit number listed on the the reagent label, in the contents list, and in the test procedures.

⚠ WARNING: Products in this catalog are not toys. Adult supervision is strongly recommended. Products may contain ingredients which require additional safety precautions; refer to all safety guidelines and Material Safety Data Sheets at: www.lamotte.com.

LEAD (Pb) weights are used in some water samplers and hydrometers. Weights should not be handled by children under 14. Adult supervision recommended.



GLOBE (Global Learning and Observation to Benefit the Environment)

A hands-on, primary and secondary school-based science and education program which unites students, teachers, scientists and community members around the world in study and research about the dynamics of Earth's environment.

The GLOBE Schools Network consists of over a million GLOBE students in more than 20,000 schools located in 109 countries. GLOBE students have reported over 17 million measurements.

THE**GLOBE**PROGRAM

"GLOBE is the quintessentially ideal program for involving kids in science."

— Nobel laureate Dr. Leon Leferman

www.globe.gov

LaMotte Products for Hydrology & Soil GLOBE Program®

GLOBE Item	Description	LaMotte Code	Shipping
100 mL Graduated Cylinder	100 mL Graduated Cylinder	2-2079	NH (1)
500 mL Graduated Cylinder	500 mL Graduated Cylinder	2-2081	NH (1)
Alkalinity Kit	Water Alkalinity Kit	4491-DR-01	NH (1)
Calibration Solution 718 (µmhos/cm), 120 mL	Conductivity Standard	6417-J	NH (1)
Conductivity Meter	Con 6 Meter	5-0039-02	NH (3)
Conductivity Tester	EC Tester	5-0082	NH (1)
ConductivityTester	pH/Conductivity/Temp TRACER	1766	NH (1)
D-Net	D-Net with pole, 500 micron mesh	0168	NH (7)
Dissolved Oxygen Kit	Dissolved Oxygen Kit	5860-01	R1(2)
Hydrometer Kit	Hydrometer and Jar	3-0025	NH (2)
Hydrometer Jar	Hydrometer Jar	3-0024	NH (1)
Hydrometer	Hydrometer	3-0011	NH (1)
Kick Net	Kick Net, 500 micron mesh	0021	NH (4)
Macroinvertebrate Classroom Activity	Macro Mania	5942	NH (2)
Macroinvertebrate Identification Key	Freshwater Aquatic Macroinvertebrate: Insect Identification Flashcards	5882-SA1	NH (1)
Macroinvertebrate Identification Key	Freshwater Aquatic Macroinvertebrate: Insect Life Cycle & Habitat Flashcards	5946	NH (1)

GLOBE Item	Description	LaMotte Code	Shipping
Macroinvertebrate Identification Key	Macroinvertebrate Identification: Waterproof Illustrated Sorting Sheets (6)	5882-SS6	NH (1)
Macroinvertebrate Sorting Dishes	Petri Dish, 25/bag	31648-25	NH (1)
Nitrate Kit (Cadmium)	Nitrate-Nitrogen 0.2 to 1.0 ppm	3615-01	R1 (2)
Nitrate Standard	1000 ppm NO_3-N, 50 mL	5392-H	NH (1)
pH 4 Buffer	pH 4.0 Buffer, 120 mL	2866-J	NH (1)
pH 7 Buffer	pH 7.0 Buffer, 120 mL	2881-J	NH (1)
pH 10 Buffer	pH 10.0 Buffer, 120 mL	2896-J	NH (1)
pH Meter	pH 5 Meter	5-0034-01	NH (3)
pH PockeTester	pH 20 PockeTester	5-0104	NH (1)
pH Tester	pH/Conductivity/Temp TRACER	1766	NH (1)
pH Test Strips	pH Test Strips, 100 strips	3-2950	NH (1)
Salinity Kit	Salinity Kit	7459-02	R1 (1)
Secchi Disk, Rope	Secchi Disk with Line	0171-CL	NH (7)
Soil Dispersing**	Soil Dispersing Reagent, 250 g	5184-K	NH (2)
Soil NPK Kit**	Soil Nitrate, Phosphorus, and Potassium Kit	3-5880	NH (1)
TDS Meter	TDS 6 Meter	5-0036-02	NH (3)
Thermometer, Armored*	Calibrated Thermometer, -5° to 45°C	1066	NH (1)

*Discount on orders of 10 units **Designed for the GLOBE program

Code 3-5880

EARTHFORCE

English & Spanish Instructions!

EARTH FORCE Low Cost Water Monitoring Kit

Ages 8 and up

Order Code 3-5886 NH (1)

Designed as a sampler that is a great introduction to any water quality monitoring program. This kit provides hands-on methods using TesTabs® for brackish, fresh or ocean waters. For long-term monitoring or groups consider the Earth Force Standard Water Monitoring kit, Code 5848. Both kits are ideal for volunteer monitoring, too!

- 8 different test factors: pH, dissolved oxygen, biochemical oxygen demand, temperature, turbidity, nitrate, phosphate and coliform bacteria
- manual with step-by-step diagrammed instructions in both English and Spanish
- TesTabs® to test 10 water samples (3 for coliform)
- laminated color chart
- 20-pack case available

Code 3-5886

Code 5911

EARTH FORCE Low Cost Estuary & Marine Monitoring Kit

Ages 8 and up

Order Code 5911 NH (1)

Designed to provide simple, economical and non-hazardous methods for testing saline and brackish water.

- same tests as the Low Cost Water Monitoring kit with an additional test for chloride (10) and only two tests for coliform
- 20-pack case available

Code 5906

EARTH FORCE Elementary Education Watershed Field Trip Kit

Grades 1-5/30 students

Order Code 5906 NH (1)

Everything you need to lead your classoom on a fun-filled exploration of a watershed. This kit tells The Watershed Story: an excellent explanation of a watershed and how it relates to nature around us.

- teacher's manual with guidelines on taking a field trip and conducting water quality tests
- perform an actual field study
- data sheets to reproduce
- tests for pH, nitrate, phosphate, and dissolved oxygen using TesTabs®
- includes all reagents and accessories and one activity from Project WET

English & Spanish Instructions!

Code 5848

AP

EARTH FORCE Standard Water Monitoring Kit

Grades 4 and up.

Order Code 5848 NH (7)

Design and implement a river study—from acquiring and reading watershed maps to determining and scheduling study sites. Ideal for community groups/volunteer monitoring. Great teacher resource!

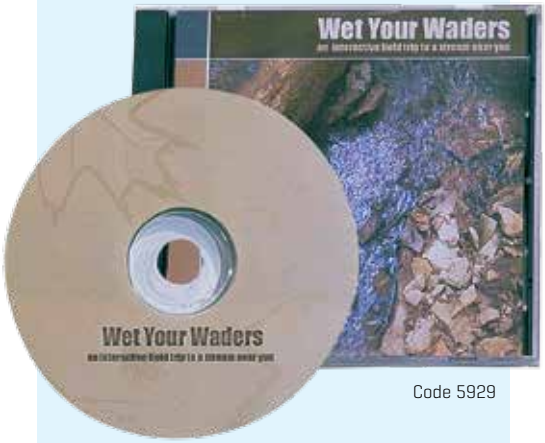
- 9 test factor modules
- macroinvertebrate bonus module
- instruction manual in both English and Spanish
- each module contains easy-to-read diagrammed instructions
- laminated color chart and instruction flashcards
- test factor flashcard
- all necessary apparatus
- TesTabs® to perform 100 tests (44 tests for coliform bacteria; unlimited for benthic macroinvertebrates and turbidity)

Test Modules Also Sold Individually

Test Factor	Code	Shipping
Biochemical Oxygen Demand	5889	NH
Coliform Bacteria	5850	NH
Dissolved Oxygen	5889	NH
Nitrate	5891	NH
pH	5890	NH

Test Factor	Code	Shipping
Phosphate	5892	NH
Turbidity	5887	NH
Temperature (0-12°C)	31821	NH
Temperature (14-40°C)	31822	NH

Code 5884-01



Code 5929

Wet Your Waders

Grades 5 and up

Order Code 5929 NH (1)

A unique companion CD-ROM to the Earth Force Standard Water Monitoring Kit (Code 5848) or any kits using TesTabs®. Take a virtual tour prior to field sampling and testing. Students select a location from an on-screen map and select water quality and macroinvertebrate techniques that will be used in the field. QuickTime® Virtual Reality transports students to the area they have selected on the watershed and provides a 360 degree view. Students learn the importance of their chosen test and then perform the technique through interactive procedures. A great pre-lab training tool, this interactive CD-ROM is an ideal choice for any class or monitoring group using tablet methods. For Macintosh 8.1 or higher; Windows 95 or higher.

AP

EARTH FORCE Advanced Water Monitoring Kit

Grade 7 and up

Order Code 5884-01 HF (18)

Contains all the LaMotte water quality test kits featured and supported in the *Field Manual for Water Quality Monitoring* (13th edition) by Mitchell & Stapp, which is the standard text for school-based water quality monitoring programs.

Test Kits Included

Test Factor	Code	Shipping
Dissolved Oxygen	5860-01	R1
Precision pH	5858-01	R1
Phosphate	3121-02	R1
Auxiliary Phosphate	7884	HF
Nitrate-Nitrogen	3110-01	R1
Turbidity	7519	N
Thermometer	1066	NH
Field Manual For Water Quality Monitoring (Mitchell & Stapp)	3-1508	NH

See Individual Test Kit section in Water Quality Monitoring section for kit pricing.

AQUATICMACROINVERTEBRATES

Code 5882-SA1

Developed in cooperation with
STROUD WATER RESEARCH CENTER
www.stroudcenter.org

Code 5882

AP GLOBE

Leaf Pack Experiments Stream Ecology Kit

Students of all ages!

Order Code 5882 NH (10)

Got bugs in your stream? This complete kit helps students discover the value of macroinvertebrates as living indicators of water quality. A totally reusable and flexible tool, this kit can be adapted for varying time limits, number of students, and grade levels.

- all apparatus included for collecting, sorting, bioindex calculation, and identification
- comprehensive instructor's manual includes:
  - reference guide
  - background material
  - stream ecology experiment ideas
  - field and data sheets to reproduce
  - glossary
  - diagrammed instructions

Also See:
D-Net pg. 28
Kick Nets pg. 28

Kit Includes

6	Mesh bags
1	Waterproof marker
1	Strainer
6	Sorting trays
60	Plastic Petri dishes
6 sorting sheets	Waterproof, illustrated
2	Thermometers
1	Hand-held scale
12	Brushes
12	Spoons
1 set	20 full color flashcards
6	Hand lenses
1	MacroLens™ magnifier
1	Nylon twine
6	Zipper-top bags
1	Tree Finder booklet
1	Instructor's manual with record sheets
2	Rulers
6	Waterproof tags

Individual Items Available

Code	Qty	Description
5882-LPB	30	Mesh bags
5882-SA1	1 set	20 full-color FreshwaterAquatic Macroinvertebrate: Insect Identification Flashcards each with photos, line drawings and identification tips (see page 9)
5882-SS6	6	Waterproof illustrated sorting sheets
5946	1 set	22-full color Freshwater Aquatic Macroinvertebrate: Insect Life Cycle & Habitat Flashcards. Includes activities. (see page 9)
5508	1	MacroLens, 4 inch diameter, 5X magnification (see page 9)

Wide Border to Hole Punch and Hook Together

Code 5882-SA1

Laminated & Waterproof!

Code 5946

GLOBE

Freshwater Aquatic Macroinvertebrate Insect Identification Flashcards

For all ages

Order Code 5882-SA1 NH (1)

Use this set of 18 full color flash cards alone or as an addition to any macroinvertebrate activity. (Included in the Leaf Pack Experiments Stream Ecology Kit, see pg. 8). The front of each card features a full-color photograph of a common macroinvertebrate in its natural environment. A list of dichotomous characteristics, a measuring scale, and detailed drawings on the back of each card aid in the identification process. Helpful notes prevent confusion between macroinvertebrates with a similar appearance. A hole can be punched in the wide border of the laminated cards so they can be organized on a ring for field or classroom use.

Developed in cooperation with STROUD WATER RESEARCH CENTER www.stroudcenter.org

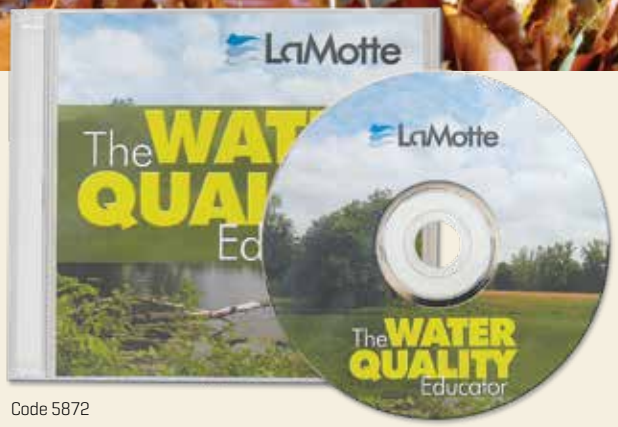
GLOBE

Freshwater Aquatic Macroinvertebrate Insect Life Cycle & Habitat Flashcards

For all ages

Order Code 5946 NH (1)

Help kids understand the life cycle and habitats of freshwater aquatic macroinvertebrates with this set of flashcards and manual. The 22 full-color cards feature photos of both immature and adult insect stages, and detailed life cycle and habitat information. The accompanying manual contains facts on insect characteristics, life cycles, taxonomy, classification, food webs, and how macroinvertebrates can be indicators of water quality. Six activities are included with the cards. The Freshwater Aquatic Macroinvertebrate: Insect Life Cycle and Habitat Flashcards can be used as an extension to the Freshwater Aquatic Macroinvertebrate: Identification Flashcards and the Leaf Pack Experiments Stream Ecology Kit.



Code 5872

The Water Quality Educator

Grades 6 and up

Order Code 5872 NH (1)

Teach your students and volunteer monitors all about natural water quality monitoring. Useful for designing a science project, community outreach program, environmental course, classroom or field activity. All three categories of water testing are included—chemical, microbiological, and macroinvertebrate, standard methods—safety, testing hints and interpreting results.

MacroLens™

Ages 8 and up

Order Code 5508 NH (1)

10 pack Order Code 5508-10 NH (6)

MacroLens with 5X magnification covers the entire Petri dish! 4" diameter.

Fits Over a Petri Dish!

Code 5508

AQUATICMACROINVERTEBRATES

Code 5942

Great Introduction to Macro Studies!

Code 5948

Bugs of the Underworld

Ages 8 and up

Order Code 5948 NH (1)

A 35 minute DVD film showing the real lives of benthic macroinvertebrates in the wild. The secret lives of macros, such as mayflies, damselflies, midges, caddisflies and stoneflies are revealed for the first time. This film could easily fit into a Discovery Channel, PBS or Animal Planet lineup and took 11 years and 8 cameras to film. Their transformation into winged adults, particularly when viewed from underwater, is a marvel of grace and beauty. Upon viewing, the universal statement among flyfishers and students is "I didn't know that!" These insects are far more than simply trout bait; they profoundly influence the aquatic ecosystem, and their presence is an accurate measurement of stream health and water quality.

For all grades especially if they are doing water quality studies using macroinvertebrates.

GLOBE

Macro Mania

Grades 3 and up

Order Code 5942 NH (1)

Expansion kit
(includes 3 decks, 3 sorting sheets)

Order Code 5943 NH (1)

Developed in cooperation with Global Water Watch

English & Spanish Instructions!

Macro Mania is a classroom adventure that introduces the use of stream macroinvertebrates to determine water quality. Lecture material sets the scene for the activity. Students will learn about the influence of land use on water quality and the practice of macroinvertebrate sampling to measure water quality. Six teams will be given a deck of macroinvertebrate cards representing a sample of macroinvertebrates from one of three sites, a poster-sized sorting sheet and a map. By sorting the deck of cards onto the sorting sheets, students will determine the water quality at their site from the distribution of macroinvertebrates in their sample. Optional math, public speaking, writing, art and card game extensions will further emphasize the land use/water quality connection. Includes a deck of cards and sorting sheets for six teams. Also includes Macro Mania manual containing background information, step-by-step instructions for activities and extensions. Colorful Macro Mania classroom poster is also included! Manual, cards, and sorting sheets printed in both English & Spanish.

Aquatic Bug Kit

Ages 8 and up

Order Code 5950 NH (1)

A creepy-crawly, wet investigation into the health of any freshwater environment. Following the easy-to-read manual, one to two students collect, observe, sort and identify aquatic insects as a guide for establishing water quality. Students complete the activity at home or spend an afternoon outdoors beside a stream or pond.

- mesh leaf bags for collection
- plastic dishes for sorting
- magnifying lens
- BUGGUIDE—a bug-by-bug description
- BUGBOARD identification chart
- manual, including activities, games and web links

Code 5950

Code 5903-03

Marine Science Outfit

Grades 5 and up

Order Code 5903-03 R1 (13)

Reagent Refills R-5903-02 R1 (4)

Perfect for testing and studying saline systems (oceans, bays, salt marshes) and brackish water.

- individual test modules for 7 key salt water test factors
- water sampling bottles
- data sheets
- three handbooks: *A Laboratory Manual for Marine Science, Limnology,* and *Investigating Water Problems*

Titration Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Dissolved Oxygen	0-10.0 ppm (50)	5860-01	R3
Hardness	0-200 ppm (50)	4824-DR-LT-01	R1
Carbon Dioxide	0-50 ppm (50)	7297-DR-01	R1
Alkalinity	0-200 ppm (50)	4533-DR-01	R1
Salinity	0-20 ppt (50)	7459-02	R1

Colorimetric Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
pH	7.7-8.4 (100)	2081-02	R1
pH	3-10.5 (100)	5858-01	R1

Urban Water Test Kit

Grades 3 and up

Order Code 5918 NH (1)

Test tap water from any source and study the impact of urban water on the city's environment. "Wet in the City," a hands-on kit, introduces the basic concepts of water chemistry—even to kids as young as third grade! TesTabs® make "Wet in the City" an easy kit that's also portable! Contains a comprehensive handbook and all necessary equipment to test for the following factors, 10 repetitions each, 5 for coliform bacteria.

Test Factors	
Chlorine	Nitrate
Copper	pH
Dissolved Oxygen	Phosphate
Hardness	Temperature
Iron	Coliform Bacteria

Code 5918

Also See:
Tapwater Tour pg. 31
Classroom Studies pg. 33
Funky Faucet pg. 35

Start a or enhance your monitoring program!

The Monitor's Handbook

A Reference Guide for Natural Water Monitoring

Discusses reasons for monitoring, organizational planning, pre-monitoring activities, site selection, extensive descriptions of the physical, biological and chemical factors, equipment, quality data, analysis and presentation.

Code 5870-01

AP

The Water Quality Educator & Monitoring Outfit

Grades 5 and up

Water Quality Monitoring Outfit

Complete test kits for seven critical water quality test factors. Includes lesson plans for grades 5-8 and 9-12. Can be purchased alone or with *The Monitor's Handbook* and *The Water Quality Educator* CD.

The Water Quality Educator CD (PC or MAC)

Teach your students and volunteer monitors all about natural water quality monitoring. Useful for designing a science project, community outreach program, environmental course, classroom and field activity. All three categories of water testing are included—chemical, microbiological and macroinvertebrate standard methods—safety, testing hints and interpreting results.

System requirments: Windows®: 64MB available RAM, Windows 98, 2000, XP or Vista. Macintosh®: 128 MB available RAM, OS X 10.1.5, 10.2.6 or 10.3.

Test Factor	Range (# Tests)	Kit Code	Shipping
pH	pH 3.0-10.5 (100)	5858-01	R1
Nitrate-Nitrogen	0-15 ppm (50)	3354-01	NH
Phosphate	0-2.0 ppm (50)	3121-02	R1
Dissolved Oxygen	0-10.0 ppm (50)	5860-01	R1
Alkalinity, Total	0-200 ppm (50)	4491-DR-01	NH
Turbidity	0-200 JTU (50)	7519-01	NH
Temperature	–5° to 45°C	1066	NH
The Water Quality Educator CD ROM (not sold individually)			
The Monitor's Handbook (see page 52)			

Macintosh and QuickTime are registered trademarks of Apple Computer, Inc.

The Water Quality Educator & Monitoring Outfit (Test kits, *The Monitor's Handbook* and CD)	Order Code 5870-01	R1 (14)
Reagent Refill for 5870-01	Order Code R-5870-01	R1 (3)
The Monitor's Handbook and CD only	Order Code 5872	NH (1)

AP® Environmental Water Quality Assessment Curriculum Module

Order Code 5845 NH (2)

Use with the Water Quality Educator for a complete water monitoring package!

The AP® Environmental Science WATER QUALITY ASSESSMENT MODULE uses the collection and manipulation of data necessary to calculate the WQI as a tool to teach students key STEM-based skills. Instead of directly giving them a math, science, technology, or engineering lesson, it provides data from real life situations that is used in the first four guided activities to develop and learn to solve problems, think analytically and work independently. In the fifth field activity, students apply the skills that they have learned and, with their understanding of water quality and the WQI, collect data to evaluate a local waterway to satisfy Section VI (Water Pollution) of the AP® Environmental Topics Outline.

In four classroom activities, students use actual data from the Kansas River watershed to:

- analyze and interpret data
- create spreadsheets
- calculate the water quality index
- generate graphs
- perform statistical analysis
- access real-time hydrological data
- observe environmental systems
- communicate accurately

In a culminating field activity, students access internet sites to identify their local watershed, choose a sampling site on a local waterway, and utilize appropriate techniques to identify their watershed. The Water Quality Assessment Package provides support materials and monitoring equipment to perform chemical and biological analyses to determine the water quality index.

Code 5845

The following environmental concepts are covered: watersheds, Water Quality Index, physical, chemical and biological water quality parameters, nutrient loading, hydrological variables, watershed ecology, remediation measures, and point-non-point pollution sources.

Includes...

- Nutrient – TTC/MacConkey BioPaddles (Code 5553) for coliform testing
- Salt/TDS/Temp Tracer (Code 1749) for temperature and TDS determination
- Teacher Resource CD (included with the Water Quality Index Module) contains:
  - Teacher/Student guide
  - water quality test procedures
  - STEM-based extension activities
  - chemical reactions
  - data spreadsheets
  - glossary
  - graphics files
  - PowerPoint presentations and Quick Time iPad/iPod videos

Hey!
NOW THERE'S AN APP FOR THAT!

Includes a **Free LaMotte BioPaddles® Colony ID™ Lite App** (page 22) which lets users compare their "unknown" microbe growth on the BioPaddle to a library of photos of "known" microbe colonies.

Code 5845-PKG

AP® The Water Quality Assessment Package

Order Code 5845-PKG NH (16)

Combining the Water Quality Educator (page 12) and the AP® Environmental Science Water Quality Assessment Curriculum Module (above), the AP® Environmental Science WATER QUALITY ASSESSMENT PACKAGE bundles the curriculum above with the test kits to provide a complete package at a reduced price!

WATERMONITORING

Limnology Outfit

Grades 5 and up

Order Code 5902-02 R1 (13)

Reagent Refill R-5902-01 R1 (4)

This field-friendly outfit contains all that is needed for testing and studying freshwater systems.

- individual test modules for 7 freshwater test factors
- water sampling bottles
- three handbooks: *Limnology, A Study of Water Quality,* and *Investigating Water Problem* data sheets

Octa-Slide 2 Comparator Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Nitrate Nitrogen	0.2-1.0 ppm (40)	3119-01	R3
Phosphate	0.2-1.0 ppm (50)	3119-01	R3
pH	3.0-10.5 pH (100)	5858-01	R1
Silica	0.5-10 ppm (50)	4463-01	R1

Direct Reading Titrator Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Carbon Dioxide	0-50 ppm (50)	7297-DR-01	R1
Dissolved Oxygen	0-10 ppm (50)	5860-01	R3
Hardness	0-200 ppm (50)	4824-DR-LT-01	N

Code 5902-02

Code 3604-01

Acid Rain Study Outfit

Grades 5 and up

Order Code 3604-01 R1 (3)

Reagent Refills 2218-G R1(1)

Collect precipitation and determine the pH levels of ponds, lakes and streams with this complete outfit—a valuable unit for any environmental science program.

- durable, tapered rain gauge
- easy-to-use pH test kit
- comprehensive study guide
- activity sheets
- 50 tests

Code 5854-02

Shallow Water Outfit

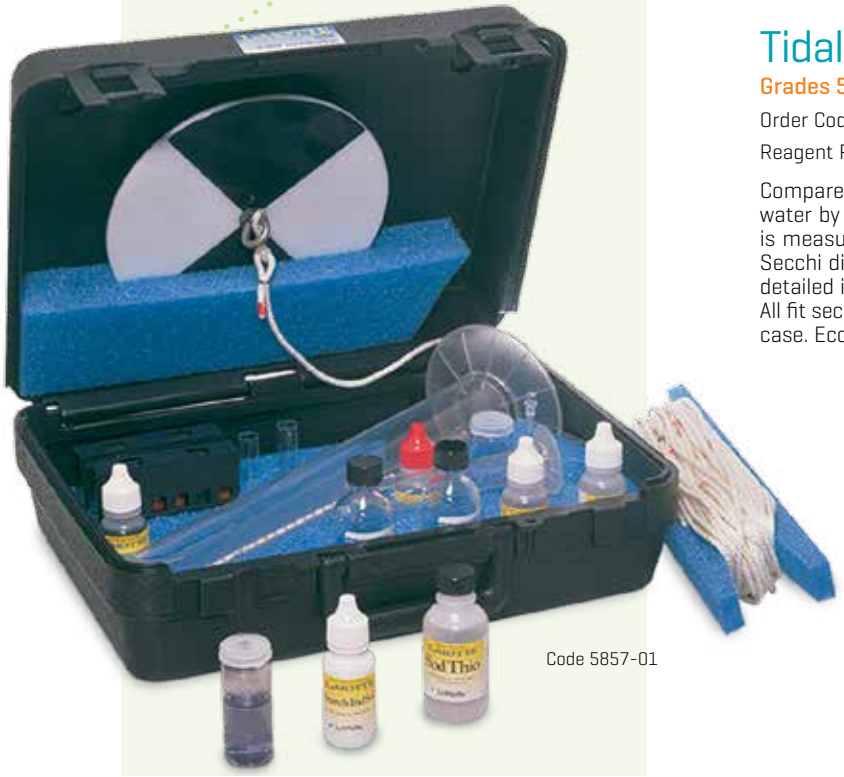
Grades 5 and up

Order Code 5854-02 R1 (9)

Reagent Refill R-5854-01 R1 (2)

Too shallow for a Secchi Disk? Turbidity is easily measured using a standardized turbidity reagent to match the turbidity of a water sample. All the necessary apparatus and reagents needed to test four basic water quality test factors are included. Economical reagent refill packages are available.

Test Factor	Test Method	Range/Sensitivity
Temperature	Thermometer	–5° to 45° C/0.5 increments
pH	Two Octa-Slide 2 Comparators	pH 3.0-10.5/0.5 increments
Turbidity	Drop Count	0-200 JTU/5 JTU increments
Dissolved Oxygen	Direct Reading Titrator	0-10 ppm O_2/0.2 ppm increments



Code 5857-01

Tidal Water Outfit

Grades 5 and up

Order Code 5857-01 R1 (10)

Reagent Refill R-5857-01 R1 (3)

Compare specific gravity of varying concentrations of salt water to freshwater by using a hydrometer and a clear, acrylic hydrometer jar. Turbidity is measured by "Secchi depth," using a 20 cm diameter, black and white Secchi disk and calibrated line. All the necessary apparatus, reagents and detailed instructions to test 5 basic water quality test factors are included. All fit securely within a foam insert and are housed in a rugged field carrying case. Economical reagent refill package available.

Test Factor	Test Method	Range/Sensitivity
Dissolved Oxygen	Direct Reading Titrator	0-10 ppm O_2/0.2 ppm increments
Temperature	Thermometer	–5° to 45° C/0.5 increments
pH	Two Octa-Slide 2 Comparators	pH 3.0-10.5/0.5 increments
Secchi depth	Secchi Disk	0-20 m/0.5m increments
Salinity	Hydrometer	1.0000 to 1.0700 SG/0.0005 increments; 0.0 ppt to 43.6 ppt salinity/0.2 ppt increments

WATERMONITORING

Code 5917-02

Water Pollution 1

Grades 5 and up

Order Code 5917-02 R1 (14)

Reagent Refill R-5917-02 R1 (3)

Ideal for examining water quality in known or suspected polluted aquatic environments.

- individual test modules for 7 key test factors
- complete instructions
- reagents to perform 50 tests for each factor
- all necessary apparatus
- three handbooks: *A Study of Water Quality, Our Environment Battles Water Pollution*, and *Investigating Water Problems*
- Field-friendly tote

Colorimetric Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Chlorine	0.2-3.0 ppm (50)	3308-01	NH
pH	3-10.5 (100)	5858-01	R1
Nitrate-Nitrogen	0.2-1.0 ppm (40)	3119-01	R1
Phosphate	0.2-1.0 ppm (50)	3119-01	R1
Ammonia-Nitrogen	1.0-8.0 ppm (50)	4795-01	R1
Temperature	-5°C-45°C	1066	NH

Titration Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Dissolved Oxygen	0-10.0 ppm (50)	5860-01	LQ

Water Pollution 2

Grades 5 and up

Order Code 5919-02 R1 (15)

Reagent Refill R-5919-02 R1 (3)

For more detailed water testing, this kit is an ideal supplement to our Water Pollution 1 outfit.

- 5 key water quality test factors
- data sheets
- three handbooks: *A Study of Water Quality*, *Our Environment Battles Water Pollution* and *Investigating Water Problems*
- Field-friendly tote

Tests

Test Factor	Range (# Tests)	Kit Codes	Shipping
Alkalinity	0-200 ppm (50)	4491-DR-01	NH
Carbon Dioxide	0-50 ppm (50)	7297-DR-01	R1
Chloride	0-200 ppm (50)	4503-DR-01	R1
Color, APHA	0-100 units (50)	3528-01	NH
Hardness	0-200 ppm (50)	4482-DR-LT-01	R1
Turbidity	0-200 JTU (50)	7519-01	NH

Also See:
Earth Force
Low Cost Kit pg. 6
Earth Force Low Cost
Estuary Kit pg. 6
Earth Force
Standard Kit pg. 7
Earth Force Watershed
Field Trip pg. 6

AM-12 · The TesTabs® Water Investigation Kit

Grades 5 and up

Order Code 5849 R1 (7)

- investigate water pollution using LaMotte's simple TesTabs® reagents.
- 12 individual test modules
- easy-to-read, diagrammed instructions
- color charts
- test factor flashcards
- all necessary apparatus
- TesTabs® to perform 100 tests
- *The Monitor's Handbook*

Code 5849

Test Factor	Code	Shipping
Alkalinity	5893	NH
Ammonia	5894	R1
Chloride	5895	NH
Chlorine	5896	NH
Chromium	5897	NH
Copper	5898	NH

Test Factor	Code	Shipping
Dissolved Oxygen/BOD	5889	NH
Hardness	5899	NH
Iron	5900	NH
Nitrate	5891	NH
pH	5890	NH
Phosphate	5892	NH

Water Pollution Detection Kit

Grades 5 and up

Order Code 5905-02 LQ (14)
Reagent Refill R-5905-02 LQ (6)

Designed to introduce concepts of water pollution detection, this versatile kit includes everything you need for a classroom demonstration.

- 16 water quality factors: alkalinity, ammonia, carbon dioxide, chloride, chlorine, chromium, copper, cyanide, total dissolved solids, hardness, iron, nitrate, pH, phosphate, salinity and sulfide
- reagents for 20-30 demonstrations of each factor
- procedures can also be performed in 3-cell and 6-cell inert plastic demonstration stages that permit magnification of colorful test reactions with an overhead projector. Color carts included. Also includes field test procedures and manual.
- test report foms
- two handbooks: *Our Environment Battles Water Pollution* and *Investigating Water Problems*

Great Teacher Resource!

Code 5905-02

WATERMONITORING

Economi-cal Refills!

Code 3308-01

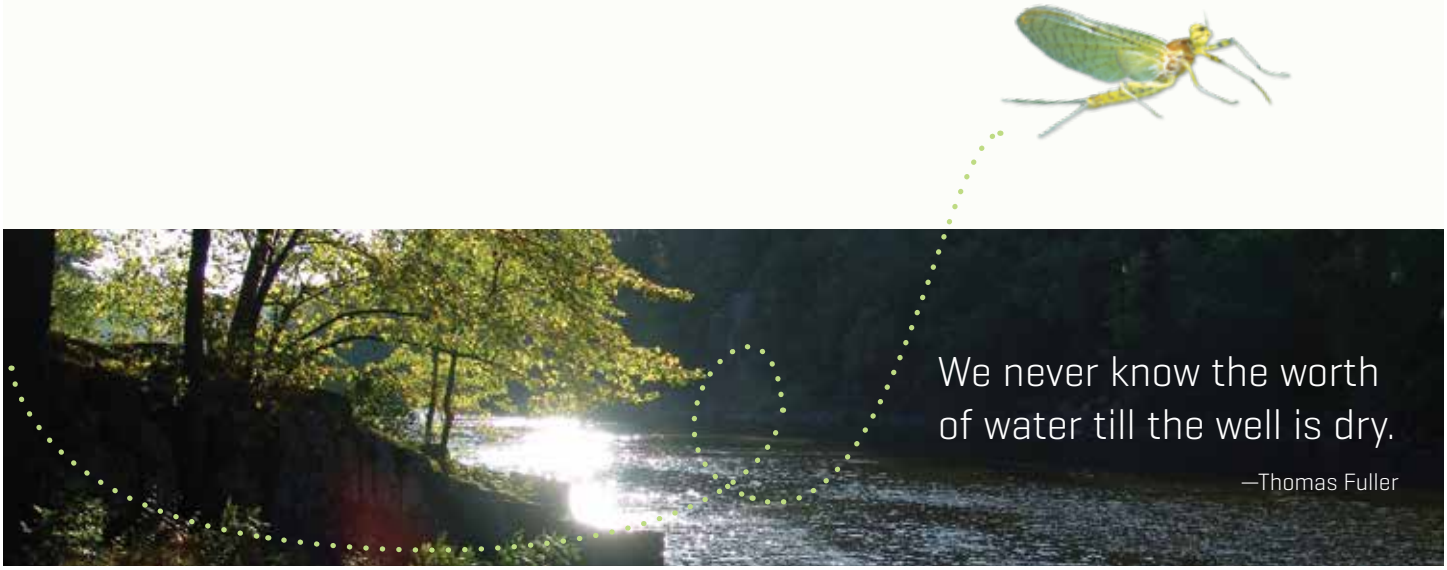
Individual Test Kits

Test Factor	Order Code	Test System	Range/Resolution	# of Tests (# Reagents)	Shipping	Reagent Refill
Alkalinity	5893	Total Alkalinity Add Tablet TesTabs®	1 tablet = 40 ppm	100 (1)	NH (1)	----
GLOBE AP	4491-DR-01	Total Alkalinity	Direct Reading Titrator 0–200 ppm/4 ppm as $CaCO_3$	50 at 200 ppm (2)	NH (1)	R-4491DR
	4533-DR-01	P & T Alkalinity Direct Reading Titrator	0–200 ppm/4 ppm as $CaCO_3$	50 at 200 ppm (3)	NH (1)	R-4533-DR
Ammonia-Nitrogen	3304-01	Salicylate Octa-Slide 2 Comparator	0.0, 0.05, 0.1, 0.25, 0.5, 1.0, 1.5, 2.0 ppm NH_3-N	50 (3)	R2 (1)	R-3304
	5864-01	Salicylate Color Chart	0.0, 0.25, 0.50, 1.0, 2.0, 4.0 ppm NH_3-N	50 (2)	R1 (1)	R-5864
	5894	Salicylate Color Chart	0, 1, 2, 4 ppm NH_3-N	100 (2)	R1 (1)	----
Arsenic	4053-02	Test Strip	<4, 4, 8, 10, 12, 14, 16, 20, 25, 30, 50, 85, 100, 150, 175, 200, 300, 400 ppb	50	R1 (8)	R-4053-02
	Recommended for high school and university use only. Teacher supervision required.					
Bacteria, Coliform	4-3616	Total Coliform LaMotte Tablet	Presence/Absence Drinking Water	1 (1)	NH (1)	----
	5850	Total Coliform LaMotte Tablet	Presence/Absence Recreational Water	44 (1)	NH (1)	----
	5553	BioPaddles Nutrient TTC/ MacConkey Agar	*E. coli* & Coliforms	10 (1)	NH (1)	----
	3-0040***	Coliscan CSK10	0-300 CFU/100mL *E. coli* and coliforms	10 (1)	NH (2)	----
	3-0041***	Coliscan MF10	0-300 CFU/100mL *E. coli* and coliforms	20 (1)	NH (3)	3-0042
Calcium	3609-01	Direct Reading Titrator	0-200 ppm/4 ppm $CaCO_3$ 0-2580 ppm/51.6 ppm $CaCO_3$	50 (3)	R1 (1)	R-3609
Carbon Dioxide	7297-DR-01	Direct Reading Titrator	0–50 ppm/1.0 ppm CO_2	50 at 50 ppm (2)	R1 (1)	R-7297-DR

Shipping Codes: NH: Non-Hazardous - No Fees R1: Small Qty. Hazardous Materials - No Fees R2 & R3: Hazardous Materials - Air Fees Only HF: Hazardous Materials - Air & Ground Fees
*(NPDWR) EPA Accepted †(NPDES) EPA Accepted ***Frozen products/dated goods. Please specify ship date.

Test Factor	Order Code	Test System	Range/Resolution	# of Tests (# Reagents)	Shipping	Reagent Refill
Chloride	4503-DR-02	Direct Reading Titrator	0–200 ppm/4 ppm Cl^- 0–20,000 ppm/400 ppm Cl^-	50 at 200 ppm (4)	R1 (1)	R-4503-DR-01
	5895	Turbidimetric Color Chart	0–24,000/ 400 ppm Cl^-	100 (1)	NH (1)	----
Chlorine Free & Total	3308-01*	DPD Tablet Octa-Slide 2 Comparator	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Cl	50 (2)	NH (1)	6905A-H & 6999A-H
	5896	DPD Tablet Color Chart	0, 1, 3, 5 ppm Cl	100 (1)	NH (1)	----
Chromium	5897	TesTabs® Color Chart	0, 0.2, 0.4, 0.6 ppm Chromium	100 (1)	NH (1)	----
Copper	6616-01	LRC Comparator	0, 0.05, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50 ppm Cu	50 (1)	NH (1)	6446-H
	5898	TesTabs® Color Chart	0, 1.5, 2, 4 ppm Cu	100 (1)	NH (1)	----
Cyanide AP	7387-02	Octa-Slide 2 Comparator	0.0, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40 ppm Free CN^-	50 (5)	R1 (3)	R-7387-01
Detergents	4507-02	Drop Count	1 drop = 1.0 ppm Detergent	60 at 5.0 ppm (3)	R1 (2)	R-4507-01
Hardness	4482-DR-LT-01	Total Hardness Direct Reading Titrator	0–200 ppm/4 ppm $CaCO_3$	50 at 200 ppm (3)	R1 (1)	R-4482-DR-LT
	4824-DR-LT-01	Calcium, Magnesium, & Total Hardness Direct Reading Titrator	0–200 ppm/4 ppm $CaCO_3$	50 at 200 ppm (5)	R1 (1)	R-4824-DR-LT
	5899	TesTabs® Add Tablet Color Chart	1 tablet = 40 or 100 ppm	100 (1)	NH (1)	----
Iron	4447-01	Total Iron Octa-Slide 2 Comparator	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm Fe	90 (2)	R1 (1)	R-4447
	7787-01	Total Iron LRC Comparator	0.05, 0.10, 0.20, 0.30, 0.40, 0.60, 0.80, 1.0 ppm Fe	30 (2)	R1 (1)	R-7787
	3347-01	Ferrous/Ferric Iron Octa-Slide 2 Comparator	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm Fe	85 (3)	R1 (1)	R-3347
	5900	TesTabs® Color Chart	0, 1, 5, 10 ppm Fe	100 (1)	NH (1)	----
Manganese	3588-02	PAN Octa-Slide 2 Comparator	0.05, 0.1, 0.2, 0.4, 0.6, 0.8, 1.0 ppm Mn	50 (4)	HF (2)	R-3588-01
Nitrate Nitrogen	3519-01 (Includes Nitrite)	Cadmium Reduction Octa-Slide 2 Comparator	0.25, 0.5, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0 ppm NO_3-N	40 (3)	R1 (1)	R-3519
	3110-01	Cadmium Reduction Octa-Slide 2 Comparator	0.25, 0.5, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0 ppm NO_3-N	40 (2)	R1 (1)	R-3110
GLOBE AP	3615-01	Cadmium Reduction LRC Comparator	0, 0.2, 0.4, 0.6, 0.8, 1.0 NO_3^--N	40 (2)	R1 (2)	R-3615-01
	3354-01	Zinc Reduction Octa-Slide 2 Comparator	0, 1, 2, 4, 6, 8, 10, 15 ppm NO_3-N	50 (2)	NH (2)	R-3354
	5891	TesTabs®, Zinc reduction Color Chart	0, 5, 20, 40 ppm NO_3	100 (1)	NH (1)	----

Shipping Codes: NH: Non-Hazardous - No Fees R1: Small Qty. Hazardous Materials - No Fees R2 & R3: Hazardous Materials - Air Fees Only HF: Hazardous Materials - Air & Ground Fees
*(NPDWR) EPA Accepted †(NPDES) EPA Accepted



WATERMONITORING

Economi-cal Refills!

Code 5860-01

Test Factor	Order Code	Test System	Range/Resolution	# of Tests [# Reagents]	Shipping	Reagent Refill
GLOBE AP Nitrate/ Phosphate	3119-01	Cadmium Reduction/ Ascorbic Acid LRC Compratator	0.2, 0.4, 0.6, 1.0 ppm NO_3-N 0.2, 0.4, 0.6, 1.0 ppm PO_4^{3-}	Nitrate: 40 [2] Phosphate: 50 [2]	R3 [2]	R-3119-01
GLOBE AP Oxygen, Dissolved	5860-01	Winkler All Liquid Reagents Direct Reading Titrator	0–10 ppm/0.2 ppm O_2	50 at 10 ppm [5]	R1 [2]	R-5860
	5889	TesTabs®Color Chart	0, 4, 8 ppm O_2	100 [1]	NH [1]	----
pH	2109-01	Bromthymol Blue Octa-Slide 2 Comparator	6.0, 6.2, 6.4, 6.6, 6.8, 7.0, 7.2, 7.4	50 [1]	NH [1]	2210-G
	2110-01	Phenol Red Octa-Slide 2 Comparator	6.8, 7.0, 7.2, 7.4, 7.6, 7.8, 8.0, 8.2	50 [1]	NH [1]	2211-G
	2111-01	Cresol Red Octa-Slide 2 Comparator	7.2, 7.4, 7.6, 7.8, 8.0, 8.2, 8.4, 8.6	50 [1]	NH [1]	2212-G
	2112-01	Thymol Blue Octa-Slide 2 Comparator	8.0, 8.2, 8.4, 8.6, 8.8, 9.0, 9.2, 9.4	50 [1]	NH [1]	2213-G
AP	5858-01	Wide Range Octa-Slide 2 Comparator, 2 bars	3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 10.5	100 [1]	R1 [1]	[2 x] 2218-G
	3-2950	Wide Range Test Strips	4-indicators, 0-14 pH/1.0 pH	100 [1]	NH [1]	----
	5890	TesTabs® Color Chart	4, 5, 6, 7, 8, 9, 10, 11 pH	100 [1]	NH [1]	----
GLOBE AP Phosphate/ Nitrate	3119-01	Ascorbic Acid/ Cadmium Reduction LRC Comparator	0.2, 0.4, 0.6, 1.0 ppm NO_3-N 0.2, 0.4, 0.6, 1.0 ppm PO_4^{3-}	Phosphate: 50 [2] Nitrate: 40 [2]	R3 [2]	R-3119
GLOBE AP Phosphate	3121-02	Ascorbic Acid LRC Comparator	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0 ppm PO_4^{3-}	50 [2]	R1 [1]	R-3121-01
	7416-02**	Stannous Chloride LRC Comparator	0.05, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1.0ppm PO_4^{3-}	50 [2]	R1 [1]	R-7416-01
	5892	TesTabs® Color Chart	0, 1, 2, 4 ppm PO_4^{3-}	100 [1]	NH [1]	----
Phosphate, Total	7884	Conversion kit, digestion, use with orthophosphate kit for total phosphate measurement, requires heat source (not included).		50 [5]	HF [2]	----
GLOBE AP Salinity	7459-02	Direct Reading Titrator	0–40 ppt/0.4 ppt Salinity	50 at 20 ppt [2]	R1 [1]	R-7459-01
	3-0025	Hydrometer Kit	0-40 ppt Salinity	Unlimited	NH [4]	----
Sulfate	7778-01	Tablet Octa-Slide 2 Comparator	0, 20, 50, 80, 120, 160, 200 ppm SO_4^{2-}	50 [1]	R1 [1]	R-7778
Turbidity	7519-01	Drop Count	5–100 JTU/5 JTU, 10–200 JTU/10 JTU	50 at 10 or 20 JTU [1]	NH [1]	7520-H
	5887	Turbidimetric	0, 20, 40, 60, 80, 100 JTU	Unlimited	NH [1]	----
Zinc	7391-02	Octa-Slide 2 Comparator	0, 1, 2, 3, 4, 6, 8, 10 ppm Zn	50 [2]	NH [1]	R-7391-01

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*[NPDWR] EPA Accepted †[NPDES] EPA Accepted **Not for use in salt or brackish waters.

Water Test Strips

LaMotte test strips are a great way to monitor water without having to measure reagents. Strips are available for the factors below...and we're developing even more!

Safe & Simple Test Strips!

Single Factor Test Strips

Test Factor	Code	Range (ppm)	Water Testing Application*	# of Tests Per Factor/Per Vial	Values (ppm)
Alkalinity	2997	0-180	Drinking, Food/ Beverage, Pool	50	0, 40, 80, 120, 180
Ammonia	3023-G	0-6	Natural Waters	25	0, 0.5, 1.0, 3.0, 60
Chlorine, Free & Total	3027-G	0-10.0	Drinking, Food/ Beverage, Pool	25	0, 0.25, 0.5, 1, 3, 10
Chlorine, Total	2979	0-5	Drinking, Food/ Beverage	50	0, 0.5, 1, 3, 5
Hardness, Low Range	2981	0-180	Drinking, Food/ Beverage	50	0, 30, 60, 120, 180
pH, Wide Range	2974	pH: 4-10	Drinking, Food/ Beverage, Pool	50	4, 5, 6, 7, 8, 9, 10
Phosphate, Low Range	3021-G-ENV	0-2,500 ppb 0-2.5 ppm	Natural Waters	25	0, 100, 200, 300, 500, 1,000, 2,500 ppb PO_4 0, 0.1, 0.2, 0.3, 0.5, 1.0, 2.5 ppm

Multi-Factor Test Strips

Test Factor	Code	Range (ppm)	Water Testing Application*	# of Tests Per Factor/Per Vial	Values (ppm)
5 Way for Natural Waters	3038-G	Nitrate: 0-200 Nitrite: 0-10.0 pH: 6.0-9.0 Alkalinity: 0-240 Hardness: 0-180	Natural Waters Aquariums	25	0, 20, 40, 80, 160, 200 0, 0.5, 1.0, 3.0, 5.0, 10.0 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0 0, 40, 80, 120, 180, 240 0, 30, 60, 120, 180
6 Way for Drinking Water	2933-G	Free Chlorine: 0-10 Total Chlorine: 0-10 Total Hardness: 0-400 pH: 4-10 Nitrite-N: 0-10 Nitrate-N: 0-50	Drinking, Food/Beverage	25	0, 0.5, 1, 3, 5, 10 0, 0.5, 1, 3, 5, 10 0, 50, 100, 200, 400 4, 5, 6, 7, 8, 9, 10 0, 0.5, 1, 5, 10 0, 5, 10, 25, 50
Iron & Copper	2994	Iron: 0-5 Copper: 0-3	Drinking, Pool	25 25	0, 0.3, 0.5, 1, 3, 50, 0.3, 0.6, 1, 3
Iron, pH, Hardness & Chlorine	2992	Iron: 0-5 pH: 4-10 Hard: 0-400 Total Chlorine : 0-10	Drinking	25 25 25 25	0, 0.3, 0.5, 1, 3, 5 4, 5, 6, 7, 8, 9, 0, 100, 50, 100, 200, 400 0, 0.5, 1, 3, 5, 10
Wide Range (pH & Total Chlorine)	2987-G	pH: 4-10 TCl: 0-50	Drinking, Food/ Beverage, Pool	25 25	4, 5, 6, 7, 8, 9, 100, 1, 5, 10, 20, 50
Nitrate & Nitrite	2996	Nitrate: 0-50 Nitrite: 0-10	Drinking	50 50	0, 5, 10, 25, 50 (NO_3-N)0, 0.5, 1, 5, 10 (NO_2-N)

*Strips shown have been evaluated for use in these applications. Use in other applications is subject to potential interferences. Contact LaMotte Technical Services for more information.

BACTERIASTUDIES

BioPaddles®

Microbiology Simplified!

- ready to use—saves time!
- reduced cost and waste
- longer shelf-life than traditional treated Petri dishes
- no refrigeration required
- no need for inoculating loops or Bunsen burners
- simple incubation requirements
- unique design enhances colony morphology characterization

BioPaddles are flexible, dual-agar paddles each side containing microbe-specific media enclosed in a sterile vial. Identify and quantify microbes in air, soil, water or any surface! BioPaddles do not require any other testing equipment—only a magnifier and warm place (or incubator) are needed.

Liquid Sampling: Remove the paddle from the vial and fill the vial (approximately 40 mL) with the sample. Insert the paddle, swirl for 15 seconds. Pour out the liquid and replace paddle in the vial and incubate.

Surface Sampling: Remove the paddle from the vial and gently touch each paddle media surface to the sample surface twice per side. Replace paddle in the vial and incubate.

Air Sampling: Remove the paddle from the vial. Invert and mount the circular cap into the vial, exposing the agar covered paddle. Expose for 15 minutes. Replace the paddle in the vial and incubate.

BioPaddles® products—all packaged 10 paddles per box. Includes general instructions and provides access to detailed technical documents for each paddle type.

All BioPaddles® products include a free app! **Free LaMotte BioPaddles® Colony ID™ Lite app** for iPads(page 23) lets users compare colony examples on BioPaddle agar types from 5 microhabitats (air, water, soil, surface and food). Also contains information regarding organisms, microbiological techniques, and more!

New **BioPaddles® Colony ID™ app** for iPads has a library of over 250 images of 30+ microbes, ideal for presumptive identification. Images of microbial growth on BioPaddles® can be captured with the iPad camera and imported for a side-by-side comparison to the images in the reference library. Using the new Report function a report including a full color image can be prepared and distributed directly by email. Expanded resource materials include Fungi and Bacteria Microanatomy and Microbe Exclusionary Charts. Available for purchase through iTunes. Visit our web site at www.lamotte.com and click on BioPaddles for a direct link.

BioPaddles

Code	Type of Agar	Description	Shipping
5550	BioPaddle Nutrient Agar	For routine culture of non-fastidious bacteria.	NH (1)
5551	BioPaddle Sabouraud Dextrose Agar	For selective cultivation of fungi (yeasts and molds)	NH (1)
5552	BioPaddle Tryptic Soy (TSA)/Rose Bengal (RB) Agars	For cultivation of a wide variety of microorganisms (TSA) and selective isolation of yeasts and molds (RB).	NH (1)
5553	BioPaddle Nutrient TTC/ MacConkey Agars	For field sampling cultivation and enumeration of coliform bacteria (TTC) and total coliform count (TCC). Gram (-) bacterial colonies appear as red dots. Gram (+) bacteria are usually inhibited. For improved differentiation between coliforms and non-lactose fermenting organisms (MAC). Gram (+) cocci are usually inhibited.	NH (1)

NOTE: Dated material. Specify ship date. Orders may be placed in advance. Orders shipped from Maryland on Monday and Tuesday only.

Code 5560

Microbe Hunter™ Activities

Grades 5 and up

A fun and safe way to bring STEM-based learning into the classroom!

STEM-based activities guide students through the culturing and presumptive identification of common microbes on innovative BioPaddles®—each containing microbe-specific media enclosed in a sterile vial. Students apply science, technology, engineering, and math concepts to the exploration of microbes that they encounter every day. Activities develop critical thinking skills and emphasize engineering as a key component.

Each Microbe Hunter includes a CD, 10 BioPaddles to perform the first two activities, and 10 magnifying lenses. Additional paddles may be purchased to perform the additional main activities, STEM extention activities and Going Further activities.

- Five expandable & adaptable activities
- Culture grocery store products and school surroundings
- Organized for classroom use
- Student teams design experiments
- Step-by-step introductory to advanced activities
- Culture bacteria without Petri dishes – no prep time
- Free microbe identification app from iTunes store
- Digital Student Guide and Teacher Guide on CD
- PowerPoint presentations for iPad, ID Guides, resources, links, etc.

REFILL:
TSA/RB BioPaddles for all Microbe Hunter activities

Code Code 5552

Activity	Order Code
Milk Microbe Hunter Activities	Code 5560

Students identify and explore microbes cultured from popular dairy products like milk, yogurt, and Kefir. Teams design a monitoring method to determine when a dairy product is spoiled. Activities and topics include probiotics, fermentation, pasteurization, and shelf life. STEM extension activities include demonstrating the correlation between pH and milk curdling.

Activity	Order Code
Surface Microbe Hunter Activities	Code 5561

Students discover factors that influence the growth and removal of surface microbes, design and evaluate cleaning protocols, and compare the effectiveness of antimicrobial materials. Activities and topics include surface characteristics, microbial diversity, biofilms, surface microbe identification, sanitizers and disinfectants. STEM extension activities ask *How Clean Are Kitchen Sponges?* And use popular mousepads to answer *Do Antimicrobials Keep Products Cleaner?*

NEW!

Activity	Order Code
Air Microbe Hunter Activities	Code 5562

Students predict which environmental conditions are favorable to airborne microbes and then propose and carry out a strategy to collect airborne microbes using passive sampling techniques. Students construct and calibrate an impact sampler to sample an airspace and determine airborne microbe contaminate levels. Activities and topics include the presumptive identification of airborne microbes, bioaerosols, cloud chemistry and precipitation, bacterial ice nucleators, and airborne diseases. STEM extension activities include *How Did Fungus Get Into King Tut's Tomb?* and *Dust and Dust Bunnies*.

NEW!

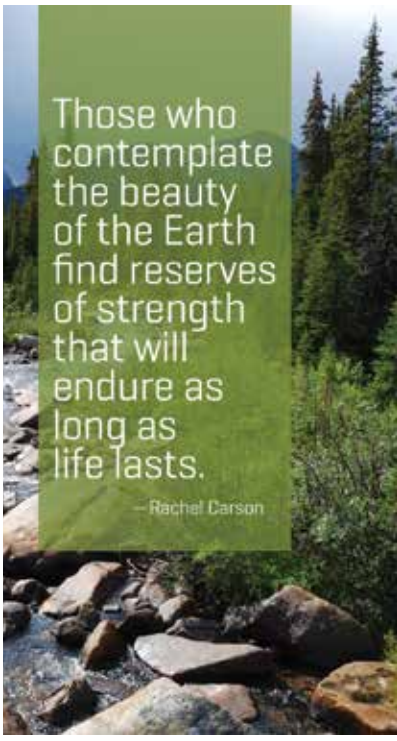
Activity	Order Code
Soil Microbe Hunter Activities	Code 5563

Students identify and explore microbes cultured from popular dairy products like milk, yogurt, and Kefir. Teams design a monitoring method to determine when a dairy product is spoiled. Activities and topics include probiotics, fermentation, pasteurization, and shelf life. STEM extension activities include demonstrating the correlation between pH and milk curdling. Activities and topics include the effect of fertilizer on lawn microbe populations, rhizosphere ecosystems, biological soil crusts, and biopesticides. STEM extension activities include Is There Such a Thing as Sterile Soil?, Investigating Soil Inoculants and Soil Crust Hunt.

NEW!

Activity	Order Code
Food Microbe Hunter Activities	Code 5565

Students determine what factors affect microbe growth in food by designing experiments to control intrinsic and extrinsic factors, predict the probability of microbe growth on foods, and design an experiment to prove their hypothesis about the preservative effects of pickling. Activities and topics include identification of microbes in and on food, food spoilage, moisture equilibrium, water activity, nutrients, and food as an ecosystem. STEM extension activities include evaluating the effectiveness of garlic as an antimicrobial agent and the demonstration of Koch's Postulate.



Also See:
Total Coliform kits
pg. 18

BioPaddles® Total Coliform Activity

Grades 9 and up

Order Code 5846 NH (2)

Fast and reliable cultivation and enumeration of coliform bacteria. Includes 5553/Nutrient TTC/MacConkey BioPaddles (10 paddles) (page 22). Activity also includes a Teacher Resource CD with a complete coliform test activity, Teacher and Student Guides, PowerPoint and iPad/iPod formatted material that provides helpful background information on coliforms, field testing, Fecal Coliform Count, Total Viable Count (TVC) and Total Coliform Count (TCC) enumeration. Can be used as a demonstration or a classroom activity. Additional BioPaddles are available. Also includes a **Free LaMotte BioPaddles® Colony ID™ Lite** app.

Refill Paddles

BioPaddles Nutrient TTC/Maconkey Agar

Order Code 5553 NH (1)

Code 5846

Hey! Now there's an App for that!

BioPaddles® Colony ID™ Apps

BioPaddles® Colony ID™ Lite App

All BioPaddles products include a free app! The **FREE BioPaddles® Colony ID™ Lite** app for iPads lets users enumerate and presumptively identify colony growth by comparison to full color images. Lab procedures, identification guides and microbe fact sheets are included. Coming soon, a camera function in the **BioPaddles® Colony ID™** app will capture microbe images for a side-by-side comparison to the library of images and inclusion in an emailable report.

BioPaddles® Colony ID™ App

The **BioPaddles® Colony ID™** app for iPads expedites the presumptive identification of microbe growth on BioPaddles with a large library of over 250 full-color images of 35 microbes and microbe growth examples in five microhabitats. Use the iPad camera function to capture an image of the growth on your paddle and add it to the library for a side-by-side comparison. Resource materials—including microbe fact sheets, identification guides, and physical characteristics charts—provide a foundation for the determination. Once the microbes have been identified, a report containing the paddle image and pertinent information can be emailed directly from the app. For more information go to the App Store

Available on the App Store

itunes.apple.com/us/app/id567584998

Micro testing without a macro investment!

Count the *E. coli* and coliforms in your favorite swimming hole. Use for ponds, streams, rivers, lakes, ocean water, tap water.

- patented combination of color-producing nutrients and enzymes that mark *E. coli* purple-blue, coliforms pink, and other non-coliform bacteria colorless
- easy method of teaching and conducting microbiology testing
- eliminates need for autoclave, water bath, and balance
- saves preparation time
- all materials supplied except water sample
- science activities available
- adds valuable quantitative capability
- EPA approved for outdoor surface water monitoring (Coliscan CSK10) and potable water (Coliscan MF10)

Coliscan CSK10*

Code 3-0040

Grades 7 and up

Order Code 3-0040 NH (2)

Ideal for sample sizes of 1-5 mL of river water or other samples with many coliforms or *E. coli* expected. The sample is collected with a sterile bottle, added directly into a bottle of Coliscan® Easygel®, and poured into a pretreated Petri dish. Under warm conditions (32-37°C) results can be ready in 24 hours. 10 tests. Color chart included.

Code 3-0041

Also See:
Total Coliform kits pg. 18
BioPaddles® Total Coliform Activity pg. 24

Coliscan MF10*

Grades 7 and up

Order Code 3-0041 NH (3)

Refill Package Order Code 3-0042 NH (3)

Ideal for large quantities of potable water or treated wastewater that contains a low level of coliforms or *E. coli*. Up to 100 mL of water is filtered through a membrane filter and placed on a Coliscan-MF nutrient rich pad in a Petri dish. 10 tests. Refill package contains enough materials to do 10 tests (refill does not include membrane filtration apparatus). Color chart included.

**Frozen products/dated goods. Please specify ship date.*

The Water Quality Educator

Grades 5 and up

Order Code 5872 NH (1)

Teach your students and volunteer monitors all about Natural Water Quality Monitoring. Useful for designing a science project, community outreach program, environmental course, classroom and field activity. All three categories of water testing are included, such as, chemical, microbiological, and macroinvertebrate standard methods, safety, testing hints, and interpreting results.

Code 5872

MacroLens™

Order Code 5508 NH (1)

10 pack Order Code 5508-10 NH (6)

MacroLens with 5X magnification covers the entire petri dish! 4" diameter.

Code 5508

WATERSAMPLING

Dissolved Oxygen Sampler

Order Code 1054-DO NH (3)

Includes the sample bottle used in our popular Dissolved Oxygen Kits, see page 20.

Calibrated line only

Order Code 1065 NH (1)

Code 3-0026

Code 1097

Bottom Sampling Dredge

Order Code 1097 NH (5)

Need a river bottom sample? Collect it easily!

- stainless steel
- trigger holds the sampler open while lowering
- scissor design closes sampler securely
- 67 cubic inches volume
- designed for soft bottoms (sand or silt)

Code 1054-DO

Dissolved Oxygen/ Temperature Sampler

Order Code 3-0026 NH (5)

Ideal for collecting dissolved oxygen samples at specific depths.

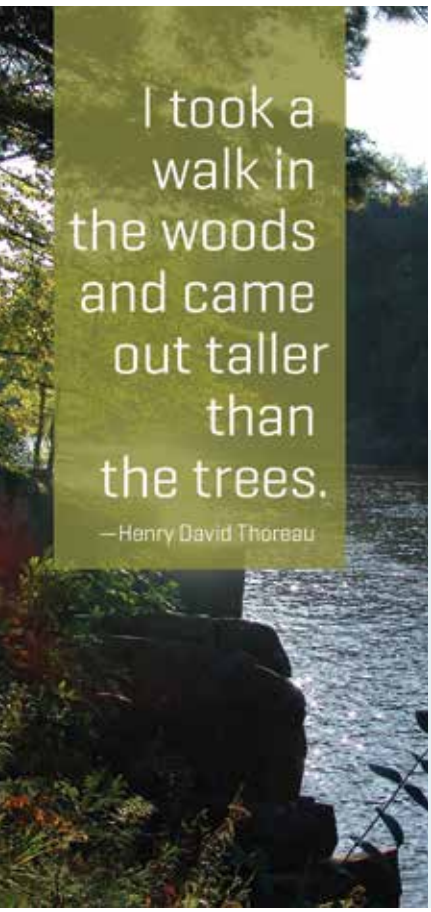
- bottle fills, overflows and flushes more than 3 times to insure a representative sample
- decreasing water pressure prevents exchange of air and water with sample
- interior chamber accommodates our armored thermometer (not included, see page 25) accommodates the same sample bottle used in our popular DO kits use with calibrated line and sounding weight (not included)

Sounding weight (2 lb) and calibrated line unit

Order Code 1064-G NH (4)

Sounding weight (2 lb) only

Order Code 1068 NH (3)



Find us on Facebook

The Water Quality Educator

Grades 5 and up

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Teach your students and volunteer monitors all about Natural Water Quality Monitoring. Useful for designing a science project, community outreach program, environmental course, classroom and field activity. All three categories of water testing are included, such as, chemical, microbiological, and macroinvertebrate standard methods, safety, testing hints, and interpreting results.

Code 5872

AP GLOBE

Deluxe Secchi Disks

Disk w/ black and white quadrants & calibrated line

Order Code 0171-CL NH (7)

Black and white Secchi (disk only)

Order Code 0171 NH (3)

Determine turbidity or degree of visibility in natural waters with this weighted 20 cm diameter disk.

- braided line
- permanent markings every half-meter up to 20 meters that won't bleed or fade

Code 0171-CL

Plankton Nets

15" (38.1cm) tall, 5" (12.7cm) dia. mouth

Order Code 1063 NH (2)

38" (96.5cm) tall, 12" (30.4cm) dia. mouth

Order Code 0023 NH (4)

Collect minute plankton quickly and easily!

- 10 mesh, 153 micron nylon cloth
- clear, conical tube attached at end of the net allows plankton viewing; includes 2 tubes
- net mouth braced by sturdy stainless steel ring and harness

Code 1063

Code 1069-01

AP

Sampling & Measurement Outfit

Grades 5 and up

Order Code 1069-01 NH (17)

A necessity for any field sampling effort. Durable, reliable sampling gear and measuring devices are housed within a rugged field carrying case for convenient transport and storage.

Outfit Includes

Description	Code
Stainless Steel Bottom Sampling Dredge	1097
Plankton Net	1063
Sounding Weight and Calibrated Line	1064-G
Armored Thermometer	1066
Water Sampling Bottle	1054-DO
Forel-Ule Color Comparator	-----
Secchi Disk	0171

WATERSAMPLING

Also See:
Leaf Pack Kit pg. 8
Bug Kit pg. 10
Macro Flashcards pg. 9
MacroMania pg. 10

Retractable Pole!

Code 0168

D-Net with Expandable Pole

Order Code 0168 NH (7)

Replacement Bag

Order Code 0167B NH (1)

Twelve-inch rim dip net is fitted with a heavy canvas bag approximately 6.5" deep. Bag attached to metal frame with clamp rings. Bottom of bag is a mesh material of approximately 500 micron nylon. Canvas skirt extends three inches below bag bottom to protect mesh. Aluminum pole extends from 52" to 84". Replacement bags available.

Code 0021-P

GLOBE

Kick-Net

Kick-Net with poles

Order Code 0021-P NH (8)

Code 0021

Kick-Net Only

Order Code 0021 NH (4)

Performing USEPA Rapid Bioassessment Protocols for benthic macroinvertebrates? You'll need this net!

- 1 x 1 meter square, 500 micron, white net
- hemmed sides hold poles, reinforced bottom seam helps anchoring
- galvanized chain recommended, not included. Specs provided in instructions for purchase locally

Rain Gauges

Tapered Rain Gauge

Order Code 1047 NH (1)

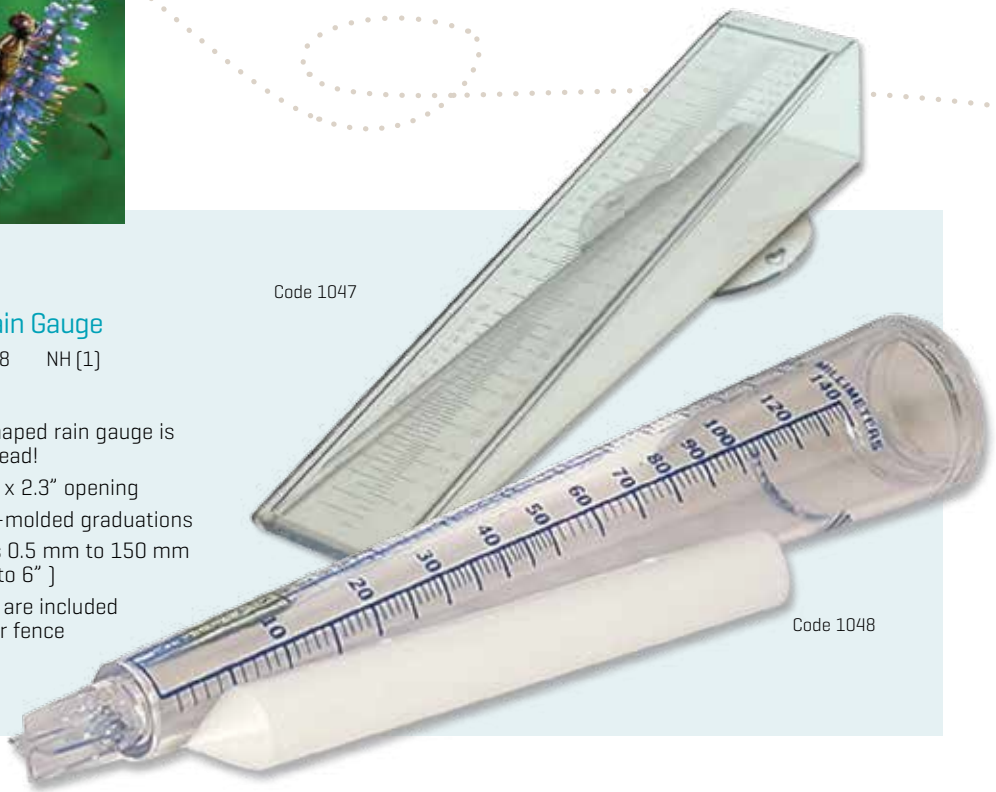
10" long, durable clear rain gauge.

- tapered to fit a 6" white plastic ground stake (included), for convenient placement and use
- 31mm diameter collection opening
- includes fasteners for post or fence mounting
- measures rainfall of 1.0 mm to 140 mm or 0.1" to 5.5"

Precision Rain Gauge

Order Code 1048 NH (1)

- wedge-shaped rain gauge is easy-to-read!
- large 2.5" x 2.3" opening
- precision-molded graduations
- measures 0.5 mm to 150 mm (or 0.01" to 6")
- fasteners are included for post or fence mounting



Code 1047

Code 1048

Student Grade!

Code 0172

Student Grade Kick Net

Order Code 0172 NH (4)

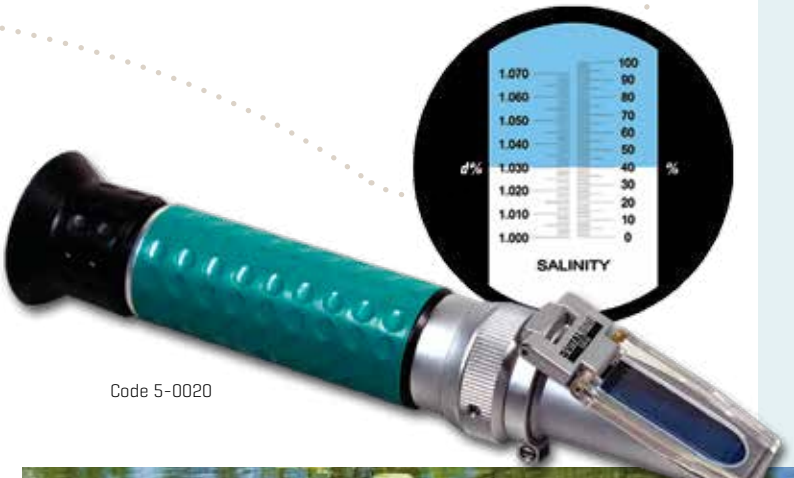
This sturdy mesh net is ideal for student macroinvertebrate collection. Durable mesh net measures approximately 35" x 45". Mesh size 1/32". Three-inch pockets on opposite sides hold poles in place. Poles not supplied with unit but can be purchased at any local hardware store.

Salinity Refractometer

Order Code 5-0020 NH (2)

- hand-held and easy-to-read!
- specific gravity (SG) and salinity (0/00) scales
- fully automatic temperature compensation over the range of 10° to 30°C
- rapid, accurate determinations require only a drop of sample

Scales:	Specific Gravity, 1.000 to 1.070 Salinity ppt (0/00), 0 to 100 ppt
Resolution:	Specific Gravity to 0.001 Salinity ppt (0/00) to 1 ppt



Code 5-0020

Hydrometer

Order Code 3-0011 NH (1)

Precision specific gravity hydrometer for salinity measurement. Use with Hydrometer Jar and Armored Thermometer.

- graduated glass scale in divisions of 0.0005 from 1.0000 to 1.0700 Specific Gravity (SG)
- measures salinity from 0.0 to 43.6 ppt
- each unit checked against NIST certified standard
- supplied in a plastic tube
- table to convert reading to salinity in parts per thousand (ppt)
- 330 mm (13"), scale length is 140 mm (5.5"). Use with Hydrometer Jar (Code 3-0024) and Armored Thermometer (Code 1066)

Hydrometer Jar

Order Code 3-0024 NH (3)

Clear, durable (PMP) cylinder is never slippery—even when wet.

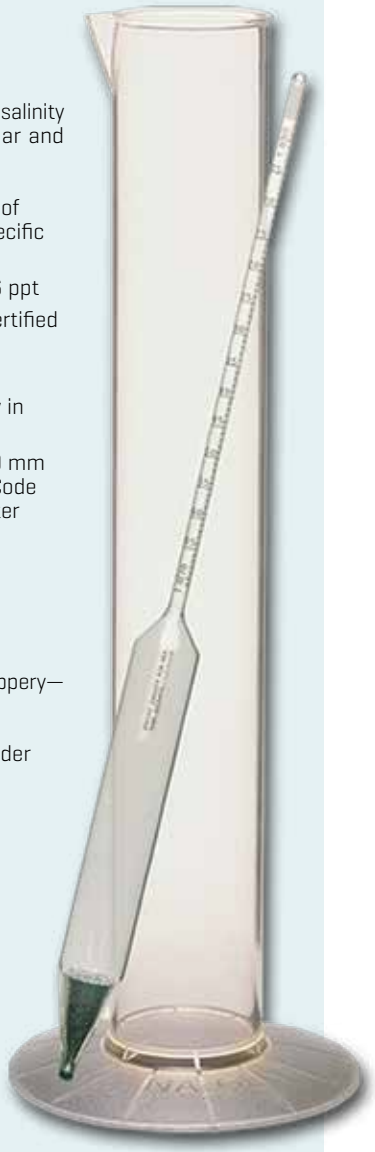
- molded, clear plastic 500 mL cylinder
- broad base for excellent stability

Hydrometer Kit

Order Code 3-0025 NH (4)

Includes both hydrometer (3-0011) and jar (3-0024).

⚠ WARNING: Contains lead weights. Weights should not be handled by children under 14. Adult supervision recommended.



Code 3-0011

GLOBE

Armored Thermometer

Order Code 1066 NH (1)

Discount on orders of 10 units. A precision, NON-MERCURY thermometer encased in protective plastic jacket.

- window opening
- engraved graduation on white tubing increases readability
- full range of –5° to 45°C in 0.5° increments

Code 1066

CURRICULUMPACKAGES

The Tour Series

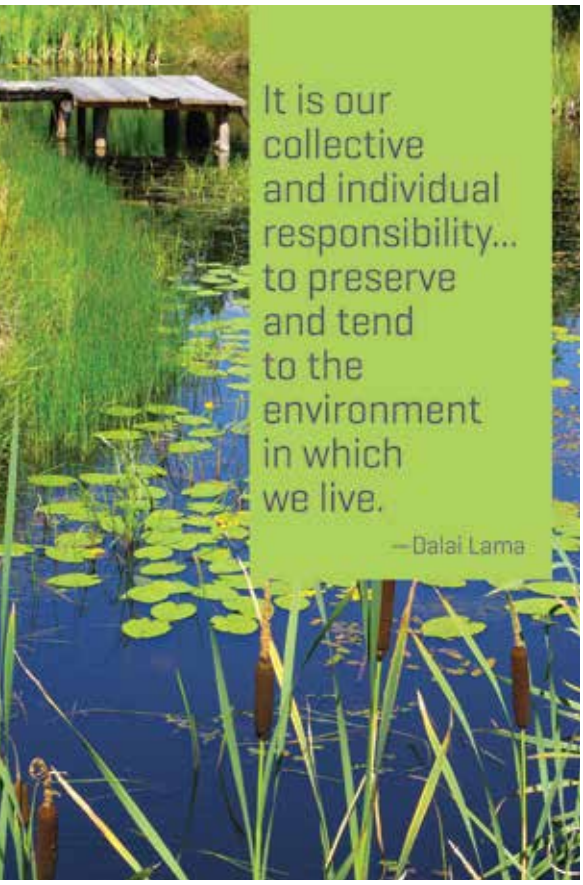
This series of complete, hands-on curricula is designed for elementary and middle-school environmental science education. Each Tour is a unique inquiry-based curriculum. They include lecture materials, illustrated handouts, teacher tips, test procedures, TesTabs® reagents and test strips, data sheets, and a variety of word puzzles to reinforce key concepts.

Tours may be used from cover-to-cover, or sections or activities may be used to mesh with current curriculum.

The Tours are ideal for use in classrooms with special populations. The flexible curriculum and activities can be adjusted to accommodate students with limited learning abilities, physical limitations, gifted and talented students, and those with limited English proficiency. There is something to keep everybody engaged in a learning activity!

No need to leave the classroom!

Code 5939



The Shore Tour

Living Responsibly on the Edge of the Ocean

Grades 4-8/40 students

Order Code 5939 NH (5)

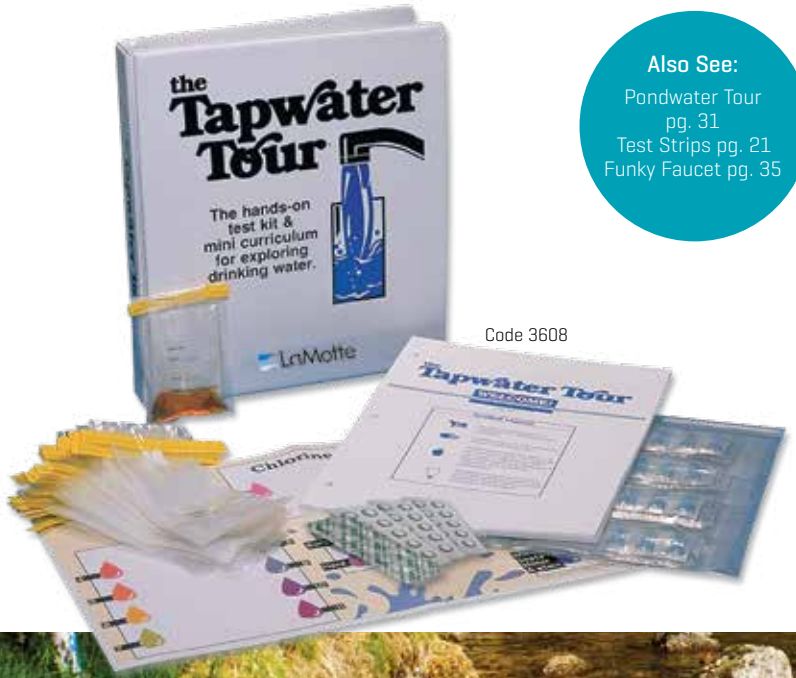
Refill R-5939 NH (1)

Also See:
Marine Science pg. 11
Salinity Refractomer pg. 29
Hydrometer pg. 29

Five units teach students, through classroom lectures and activities, how their everyday actions affect the ocean. Whether they live in an urban, rural or a shore setting, students and their families can do things to help keep ocean and shore ecosystems healthy. Topics include an introduction to coastal ecosystems, energy conservation, pollution, estuaries, beach erosion and restoration, litter, recycling, oil spills, shoreline development and marine debris. Each unit is packed with activities and spotlights a traditional or not so traditional marine career. Real news stories and articles bring the lecture material to life. Includes data sheets and a thought-provoking game to bring it all together at the conclusion of the tour. Help students develop a sense of stewardship toward shores and oceans that will remain with them for the rest of their lives.

- informative lecture material with real life stories
- teacher tested activities from EPA, NOAA and The Marine Mammal Center
- CD with printable handouts, data sheets, and more
- links to activities and information from ocean experts
- complete hands-on curriculum
- spotlights of traditional and non-traditional marine careers
- step-by-step classroom activities, team data sheets and handouts
- incorporates science, math, language arts and social studies
- extensions and "Webquests" for each unit
- links to over 100 ocean-related resources

⚠ WARNING: This product is not a toy or game, but does contain small parts/pieces that could become a choking hazard.



Code 3608

Also See:
Pondwater Tour pg. 31
Test Strips pg. 21
Funky Faucet pg. 35

The Tapwater Tour®

Grades 4-8/50 students

Order Code 3608 NH (4)

Reagent Refill R-3608 NH (1)

What's coming out of your tap? The Tapwater Tour is an exciting classroom investigation of water quality through the examination of the chemical properties of water directly from the tap. Each student on the Tapwater Tour completes several units while conducting his/her own water quality tests using simple TestTabs® reagent tablets. Students learn the relationships between good and poor water quality while examining the pH, chlorine, hardness, copper and iron of water from the tap. Incorporates science and math activities. Tablets and sample test bags for 50 students.

Find us on Facebook

Study a watershed in the classroom!

The Watershed Tour™

Grades 4-8/30 students

Order Code 5419 NH (4)

Reagent Refill R-5419 NH (1)

Can't get your class to a river? Need a meaningful watershed experience? Study a virtual watershed! Through a week-long series of activities students "test" four sites along a river continuum—from the headwaters to the mouth—to study how the river changes, and how human activities influence water quality. Introduce students to stream and river ecosystems through a classroom-based tour of a virtual watershed. The class will learn about stream ecology, water quality issues and their own connection to a watershed using TesTabs® tablet tests, games and activities. Incorporates science and math and geography activities. Includes lecture materials, illustrated handouts, teacher's tips, test procedures, TesTabs® reagents, data sheets and games. TesTabs® reagents and test tubes for 30 students in groups.

Code 5419

Pondwater Tour

Grades 4-8/50 students

Order Code 5418 N (4)

Reagent Refill R-5418 N (1)

Study and measure changes in water quality in any body of water—from lakes to aquariums! The Pondwater Tour is a great classroom introduction into the study and measurement of changes in the water quality of a lake, stream, pond, aquarium or even a fish bowl. Each student on the Pondwater Tour conducts water quality tests for pH, dissolved oxygen, nitrate and ammonia using simple TesTabs® reagent tablets. Students investigate natural processes and variables that create changes in water quality over time. Incorporates science and math activities. Tablets and sample test bags for 50 students.

Code 5418

CURRICULUMPACKAGES

Also See:
NPK Soil Kit pg. 48
Nitty Gritty Soil Kit pg. 35
Soil pH Kit pg. 48
Soil Sampler pg. 49
Funky Faucet pg. 35

Code 5425-01

The Topsoil Tour

Grades 4-8/50 students

Order Code 5425-01 NH (4)

Reagent Refill R-5425-01 NH (1)

Get the dirt on your dirt! The Topsoil Tour is an exciting classroom investigation into the physical and chemical properties of soil. Each student on the Topsoil Tour completes seven units while conducting his/her own soil tests for soil texture, pH, nitrogen, phosphorus and potassium using simple TesTabs® reagent tablets. Incorporates math and science activities. Tablets and sample test bags for 50 students.

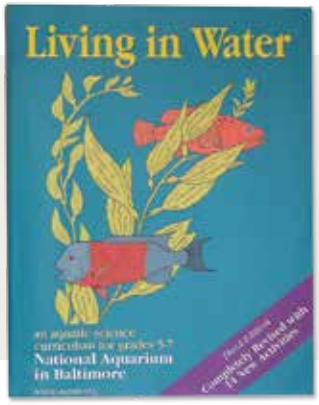
AP® Environmental Science Water Quality Assessment Curriculum Module

Order Code 5845 NH (1)

The AP® Environmental Science WATER QUALITY ASSESSMENT MODULE includes and an extensive curriculum that uses the exploration of the Water Quality Index to teach students STEM-based skills that they will apply through classroom and field activities to satisfy Section VI (Water Pollution) of the **AP® Environmental Topics** Outline. Includes 10 Nutrient – TTC/MacConkey BioPaddles® (Code 5553) for coliform testing, Salt/TDS/Temp Tracer (Code 1749-01) for temperature and TDS determination and Teacher Resource CD-ROM. Module is designed to be used with the Water Quality Educator (Code 5870-01, pg 12.)

Teacher Resource contains: Teacher/Student Guides, water quality field procedures, STEM-based activities, PowerPoint presentations, Quick Time iPad/iPod videos for Watershed Ecology, WQI, Water Pollution and Statistical Analysis. Also includes a **Free** LaMotte BioPaddles® Colony ID™ Lite app. (Page 22)

Code 5845



Living in Water

Department of Education at the National Aquarium in Baltimore

Order Code 1598 NH (1)

An aquatic science textbook containing 50 activities that integrate physical, earth and life science. It can be used as a complete curriculum or individual activities. Classroom based scientific studies of water, aquatic environments and the plants and animals that live in water. Field studies can be adapted for use in any body of water form the ocean to a fish bowl. 395 pages.

Classroom Studies Series

Ten Lab Packages for Water & Soil Demonstrations

Grades 5-8

These lab packages are designed to reinforce key concepts introduced in lecture materials on drinking water treatment and water and soil environmental studies. Teacher manual includes tips on organizing the lab demonstration, introductory information on each test factor and suggestions for additional experiments.

- teacher manual
- introductory information
- student procedures/data sheets (to reproduce)
- lesson plans included
- soil samples for all soil units
- reagent composition information
- apparatus and reagents for 5 teams to perform 5 demonstrations each, or a total of 25 demonstrations
- reagent refills available

Code 5962

Order Code	Description		Shipping	Refill	Refill/ Shipping
5962	Water Treatment Lab	Investigate odor, color and turbidity of drinking water and water treatment processes.	NH (2)	----	----
5963	Dissolved Oxygen Lab	Demonstrate the importance of dissolved oxygen in natural waters. Create your own samples, relating the importance of temperature to oxygen saturation.	NH (2)	3976A-H	NH (1)
5965	Soil pH Lab	Determine the soil pH of known samples as well as your own samples.	NH (2)	R-5965	NH (1)
5966	Soil Texture Lab	Separate the sand, silt, and clay fractions of a known soil sample. Determine the soil texture of a soil sample from your garden.	NH (2)	5644WT-H	NH (1)
5967	Hardness In Water Lab	Measure the hardness of a known sample and demonstrate the aesthetic effects of drinking water. 1 drop = 1 gpg	R1 (2)	----	----
5968	Soil Nutrients – Nitrate Lab	Review the importance of these nutrients and their affect on plant growth and nutrition. Soil samples included. Each lab sold separately.	R2 (2)	R-5968	R2 (1)
5969	Soil Nutrients – Phosphorus Lab		R1 (2)	R-5969	R1 (1)
5970	Soil Nutrients – Potassium Lab		NH (2)	R-5970	NH (1)
5971	Nutrients in Water Lab	Measure nitrate and phosphate in prepared samples. Learn the importance of these nutrients as pollution indicators.	NH (2)	R-5971	NH (1)

Also See:
Wet Your Waders pg. 7
Tapwater Tour pg. 31
Water Treatment Lab pg. 33
Funky Faucet pg. 35

Earth Force Low Cost Water Monitoring Kit

English & Spanish Instructions!

Ages 8 and up

Order Code 3-5886 NH (1)

Need to test fresh, brackish or saline water? Designed as a sampler that is a great introduction to any water quality monitoring program. This kit provides hands-on methods using TesTabs®. For long term monitoring, consider the Earth Force Standard Water Monitoring kit, code 5848, on page 7. Both kits are ideal for citizen monitoring, too.

- 8 different test factors: pH, dissolved oxygen, biochemical oxygen demand, temperature, turbidity, nitrate, phosphate and coliform bacteria
- manual with step-by-step diagrammed instructions in both English and Spanish
- all necessary apparatus
- TesTabs® to test 10 water samples (3 for coliform)
- laminated color chart

Code 3-5886

Code 5918

Urban Water Test Kit

Grades 3 and up

Order Code 5918 NH (1)

Test tap water from any source and study the impact of urban water on the city's environment! "Wet in the City," a hands-on kit, introduces the basic concepts of water chemistry–even to kids as young as third grade! TesTabs® make "Wet in the City" an easy kit that's also portable! Contains a comprehensive handbook and all necessary equipment to test for the following factors, 10 repetitions each, 5 for coliform bacteria.

Test Factors
Chlorine
Copper
Dissolved Oxygen
Hardness
Iron
Nitrate
pH
Phosphate
Temperature
Coliform Bacteria

Aquatic Bug Kit

Ages 8 and up

Order Code 5950 NH (1)

A creepy-crawly, wet investigation into the health of any freshwater environment. Following the easy-to-read manual, one to two students collect, observe, sort and identify aquatic insects as a guide for establishing water quality. Students complete the activity at home or spend an afternoon outdoors beside a stream or pond.

- mesh leaf bags for collection
- plastic dishes for sorting
- magnifying lens
- BUGGUIDE—a bug-by-bug description
- BUGBOARD identification chart
- manual, including activities, games and web links

Code 5950

GLOBE

NPK Soil Test Kit

Grades 5 and up

Order Code 3-5880 NH (1)

Specifically designed to meet the needs of the GLOBE Program™, this kit is safe, fun and can easily ship anywhere!

- 50 tests each for nitrogen, phosphorus and potassium
- uses TesTabs®
- all necessary apparatus
- simple, diagrammed instructions
- laminated color chart

Code 3-5880

Soil pH Test Kit

Grades 5 and up

Order Code 5912 NH (1)

By popular demand, TesTabs® method. Companion to Soil NPK kit (Code 3-5880). Simple diagrammed instructions.

- 50 tests for pH
- Wide range 4-11 in 1.0 pH units
- Distilled or deionized water recommended

Code 5912

Funky Faucet Sink Science

Code 5914

Ages 8 and up

Order Code 5914 NH (1)

What's coming out of your funky faucet? Test tap water for pH, chlorine, hardness, copper and iron. Learn while you laugh with Just for Fun activities including make your own lava lamp and edible experiments like the Pollution Parfait.

- TesTabs reagents to run 10 tests each
- instructions for 5 simple water quality tests
- test tubes
- word search games
- internet resources

Nitty-Gritty Soil Science

Code 5913

Ages 8 and up

Order Code 5913 NH (1)

Make friends with earthworms, and discover the importance of composting. This kit is a great introduction to the basic concepts of soil science! Investigate healthy plant requirements for proper soil texture, ideal levels of soil pH and nutrients. Learn to perform pH, nitrate, phosphate and potassium soil tests (using TesTab tablet methods). Reagents for 10 tests of each test factor are included.

Code 1741

Code 1766

Water Resistant!

pH TRACER

Order Code 1741 NH (1)

- read pH from 0.00-14.00 pH to 0.01 pH resolution
- supplied with 4, 7, 10 pH buffer tablets
- automatic self calibration to 1, 2 or 3 points
- extra bold display includes analog bar graph feature
- memory can store up to 15 readings
- chlorine and pH modes display sample temperature
- unit identifies which probe is in use and retains calibrations
- automatic shut-off and low battery indicator; uses four LR-44 batteries
- optional total chlorine probe (1732) makes unit a true ISE; TCL tablets (7044A) required

pH TRACER Accessories

Code	Description
1733	pH Probe; Range: 0-14.00/±0.01 pH
1734	ORP probe; Range: ±999mV/±4mV
1732	Cl_2 probe; Range: 0-10.00/±10% of reading
7044A-J	TCL tablets, 100 pack

pH/Conductivity TRACER

Order Code 1766 NH (1)

pH/Conductivity Sensor only

Order Code 1755 NH (1)

- measure 5 parameters including Conductivity, TDS, Salinity, pH and Temperature using one electrode
- units of measure: pH, µS, mS, ppm, mg/L, g/L, °C, °F
- memory stores up to 25 labeled readings
- auto power off and low battery indicator

Decription	Range	Resolution	Accuracy
Conductivity	0 to 199.9 µS, 200 to 1999 µS, 2.00 to 19.99 mS	0.1 µS	±1%
TDS/Salinity	0 to 99.9 ppm (mg/L), 100 to 999 ppm (mg/L), 1.00 to 9.99 ppt (g/L)	0.1 ppm (mg/L)	±2%
pH	0.00 to 14.0 pH	0.01 pH	±0.01%
Temperature	32° to 149°F (0° to 65°C)	0.1°F/C	±1.8°F/°C

Code 1766:
Use separate pH & Conductivity/TDS meters if sample conductivity is less than 200 µs. High conductivity readings may result using a combined pH/conductivity/TDS meter in low conductivity samples. Separate meters are available.

Code 1749

Code 1761

EC/TDS/Salt TRACER

Order Code 1749 NH (1)

Salt/TDS/Temp Sensor only

Order Code 1765 NH (1)

- easy to use, water resistant design
- 1-2% accuracy for EC, TDS and salt modules
- automatic temperature compensation
- memory can store up to 15 readings
- auto shut off and low battery indicator
- uses four SR-44W batteries

Description	Range	Resolution	Accuracy
Conductivity	0 to 199.9 µS, 200 to 1999 µS, 2.00 to 19.99 mS	0.1 µS	±1%
TDS/Salinity	0 to 9,999 ppm (mg/L)	0.1 ppm (mg/L)	±2%
Temperature	32° to 149°F (0 to 65°C)	0.1°F/°C	±1.8°F/°C

EC/TDS/Salt TRACER Accessories

Conductivity Standard, 1413 µS, 500 mL	Order Code 6354-L	NH (1)
Conductivity Standard, 12,880 µS, 500 mL	Order Code 6317-L	NH (1)
pH Buffer Solution see below		

Dissolved Oxygen TRACER

Order Code 1761 NH (1)

DO Sensor Module

Order Code 1762 NH (1)

- oxygen level displayed as % Saturation from 0 to 200.0% or Concentration from 0 to 20.00 ppm (mg/L)
- adjustable Altitude Compensation (0-20,000 ft in 1,000 ft increments)
- adjustable Salinity Compensation from 0 to 50 ppt
- memory stores up to 25 data sets with DO and Temperature reading
- self-calibration on power up; Data Hold, Auto power off, Low battery indicator
- optional 3 ft (1m) or 16 ft (5m) extension cable
- complete with DO electrode, protective sensor cap, spare membrane cap, electrolyte, four 1.5V SR44W batteries and 48" (1.2m) neckstrap

Description	Range	Resolution	Accuracy
DO (sat. mode)	0 to 200.0%	0.1%	±2% FS
DO (conc. mode)	0 to 20.00 ppm (mg/L)	0.01 ppm (mg/L)	0.4 ppm (mg/L)
Temp.	32 to 122°F (0 to 50°C)	0.1°F/°C	±1.8°F (1°C)

Optional TRACER Accessories

DO Membrane Kit (6 screw-on membranes and solution)	Order Code 1761M	NH (1)
Weighted Stand w/Sample Cups (5)	Order Code 1746	NH (1)
Sample Cups w/caps (24)	Order Code 1745	NH (1)
DO Extension Cable (1 meters)	Order Code 1763	NH (1)
DO Extension Cable (5 meters)	Order Code 1764	NH (1)

Standardized pH Buffer Solutions

For use in calibration of pH meters. Available in 120 mL (-J) and 500 mL (-L) sizes.

pH Value	Order Code
4.00	2866
7.0	2881
10.00	2896

Conductivity/TDS Solutions

Value	Order Code
74 µmohs/cm, 52 ppm	6416-L
718 µmohs/cm, 503 ppm	6417-L
1,413 µmohs/cm,989 ppm	6354-L

1 µmohs = µS

ELECTRONICINSTRUMENTATION

PockeTesters

They float! These waterproof PockeTesters can be intermittently submerged to a depth of 3 feet and the waterproof feature makes cleanup easy and quick. Replacement electrodes help to reduce long-term costs.

Waterproof!

	TDS PockeTester	EC Conductivity PockeTester	pH PockeTesters	
Model	**TDS PockeTester 11 Dual Range**	**EC PockeTester 11 Dual Range**	**pH 10**	**pH 20**
Waterproof	5-0080	5-0082	5-0103	5-0104
Range	0 to 1,990 ppm, 0 to 10.00 ppt	0-2000 µS, 0-20 mS	–1.0 to 15.0 pH extended range	
Resolution	10 ppm, 0.10 ppt	10 µS, 0.10 mS	0.1 pH	0.01 pH
Accuracy	±1%FS	±1%FS	±0.1 pH	±0.01 pH
Calibration	Against appropriate calibrating solutions; Single point	One-point, push button calibration using buttons inside battery compartment	Select up to 3 points (4.0, 7.0, 10.0)	
Operating Temperature	32 to 122°F; 0 to 50°C	32 to 122°F; 0 to 50°C	32 to 122°F; 0 to 50°C	
Temperature Compensation	Automatic (ATC) 0 to 50°C	Automatic (ATC) 0 to 50°C	Automatic (ATC) 0 to 50°C	
Special Functions	Full reading displayed	Full reading displayed	On/Off or Auto-Off after 8.5 min.; HOLD; CALibrate; CONfirm	
Power & Battery Life	Four 1.5V batteries (supplied); 100 hrs. continuous use	Four 1.5V batteries (supplied); Eveready A76BP, 100 hrs. use; Eveready 303, 140 hrs use	Four 1.5 V alkaline cell batteries (supplied), 500 hours use	
Replacement Electrode	5-0084	5-0084	5-0097	
Shipping	NH (1)	NH (1)	NH (1)	
Size (LxWxH)	8.5 x 2.4 x 2.5 in / 21.6 x 6.1 x 6.4 cm (boxed) 6.5 x 1.5 in / 16.5 x 3.8 cm in diameter (unit)			

2020we Portable Turbidity Meter

Order Code 1970-EPA NH (6)

Perfect for field and laboratory applications, this compact and easy-to-use instrument is an exceptional value. This meter meets or exceeds EPA turbidity testing requirement US EPA 180.1 standard and is waterproof to IP67.

Specifications

Instrument Type:	Nephelometric turbidity; calibrated in NTUs
Range:	0-4000 NTU
Resolution:	0.01 from 0-10.99 NTU, 0.1 from 11-109.9 NTU, 1 from 110-4000 NTU
Response Time:	<2 seconds
Languages:	English, French, Spanish, Japanese, Italian, Portugese, Chinese
Accuracy:	From 0-2.5 NTU/±0.05 NTU; From 2.5-100 NTU/±2%; Above 100/±3%
Display:	6-line with backlit display; 160 x 100 backlit LCD; 20 x 6 line graphics
Light Source:	Tungsten (EPA), complies with EPA 180.1 standard
Sample Chamber:	Accepts 25 mm diameter flat-bottom, screw-capped, sample tubes
Serial Interface:	USB
Power:	USB computer/wall adapter or lithium ion rechargeable battery, 3.7V
Size (LxWxH):	7.5 x 3.5 x 2.5 in / 19.1 x 8.9 x 6.4 cm

Waterproof!

Code 1970-EPA

- Waterproof to IP67
- Lithium rechargeable battery
- USB port
- 7 languages
- Backlit display
- Waterproof carrying case

pH Meters

GLOBE

Code 5-0034-01

Model	pH 5 Plus		pH PLUS DIRECT 2			
	pH	Temperature	pH	Temperature	Concentration	mV
Order Code	w/out case 5-0034-01 with case 5-0035-01		pHPLUS Direct 2 meter, liquid buffers (4, 7, 10) w/case Order Code 5-1936-01 pH Electrode, gel filled Order Code 1904 Temperature Probe Order Code 1909			
Range:	0.00 - 14.00 pH	0.0 - 100.0°C	0.00 to 14.00 pH	001 to 100.0°C	0.01 to 1999 ppm	-500 to 500 mV
Resolution:	0.01 pH	0.1°C	0.01 pH	0.1°C	0.01, 0.1, 1 ppm	0.1 mV
Accuracy:	±0.01 pH	±0.5°C	±0.01 pH	±0.5°C	±1% of reading	±0.2, 2 mV
Calibration:	Auto Buffer Recognition Up to 3 Buffer Values (USA, NIST, Pb)	0.1°C increments	1 to 3 points (USA, NIST, pH)		2 to 3 points (min 2 points)	
Temperature Compensation:	Automatic/Manual (0 to 100°C)		Automatic/Manual (0 to 100°C)			
Power:	4 AAA alkaline batteries (supplied) 500 hours		4 AAA alkaline batteries (supplied) 500 hours			
Auto shut-off:	After 17 minutes		After 17 minutes			
Operating Temperature:	32 to 122°F; 0 to 50°C		32 to 122°F; 0 to 50°C			
Electrode:			Epoxy, Ag/AgCl			
Shipping	NH (3)		NH (3)			
Size:	2.8 x 5.8 x 1.4 in / 7.1 x14.7 x 3.6 cm					

Digital Dissolved Oxygen & Temperature Meter

Order Code 5-0107-01 NH (3)

Portable hand-held dissolved oxygen meter designed to provide measurements for the most critical water quality parameter. Digital readout provides mg/L, % saturation and temperature readings by selecting a mode. Features automatic temperature compensation (ATC) for mg/L and % saturation; salinity compensation is manual by direct dial. Meter comes packaged in a convenient carrying case with 2 replacement membrane cartridges, electrolyte and protective probe storage bottle.

- No meter warm-up required
- Low maintenance probe
- Key in salinity and pressure values manually
- Independent 100% and zero adjustment calibrations
- Offset adjustment capabilities
- Displays electrode diagnostics
- Easily toggle from mg/L (ppm) or % saturation to temperature mode

	Range	Resolution	Accuracy
mg/L	0.00 to 20.00 mg/L (ppm)	0.01 mg/L (ppm)	±1.5% FS
% Saturation	0.00 to 200.0%	0.1%	±1.5% FS
Temperature	-0.5 to 105°C	0.1°C	±0.5% C
Salinity Correction	0.0 to 50.0 ppt	0.1 ppt	Method: Automatic correction after manual input
Barometric Pressure Correction	500 to 1499 mm Hg (66.6 to 199.9 kPA)	1 mm Hg (0.1 kPA)	Method: Automatic correction after manual input
Temperature Compensation	Automatic or manual from 0.0 to 50.0°C		
% Saturation Calibration Points	100% in saturated air or air-saturated water 0% in zero oxygen solution		
Response TIme	60 seconds to achieve 95% of the reading		
Operating Temperature	0 to 50°C		
Probe	Galvanic/Thermistor; 3 ft probe cable		
Power	Fout 1.5V AA batteries (included), > 700 continuous use		
Dimensions	5.5 x 2.7 x 1.3 in / 14 x 6.9 x 3.3 cm		
Weight	1.0 lb (0.45 kg)		

Code 5-0107-01

Optional Accessories

Replacement probe w/3 ft cable	Order Code 5-0129	NH (1)
DO Replacement membranes (2) and electrolyte solution	Order Code 5-0137	NH (1)

Conductivity Meters

Model	**CON 6 Plus Meter**	**TDS 6 Plus Meter**	**CON 6 Plus & TDS 6 Plus**
	(Conductivity)	(TDS)	(Temperature)
Order Code	w/out case **5-0038-02** w/case **5-0039-02**	w/out case **5-0036-02** w/case **5-0037-02**	Included
Range:	0.0 to 20.00, 200.0, 2,000. µS/cm 0 to 20.00, 200.0 mS/cm	0.0 to 10.00, 100.0, 1000 ppm 0 to 10.00, 100.0, 200 ppt	-10.0 to 110.0°C
Resolution:	0.01, 0.1, 1µS, 0.01, 0.1 mS/cm	0.01, 0.1, 1 ppm, 0.01, 0.1, 1 ppt	0.1°C
Accuracy:	±1% full scale	±1% full scale	±0.5°C
Calibration:	one point per range (five points if each range is calibrated)		Offset 0.1°C increments
	Auto- or Manual-ranging		Selectable
	Auto Standard Recognition		Selectable (Con 6 Plus)
Temperature Compensation:	Automatic/Manual from 0 to 50°C		
Power:	4 AAA alkaline batteries (supplied) >60 hours continuous use		
Operating Temperature:	32 to 122°F; 0 to 50°C		
Shipping	NH (3)		
Size:	2.8 x 5.8 x 1.4 in / 7.1 x 14.7 x 3.6 cm		

Code 5-0038-02

SMART3 Colorimeter

Order Code 1910 NH (6)

The user-friendly waterproof SMART3 Colorimeter is the direct reading colorimeter for complete on-site water analyses. Over 80 pre-programmed tests can be run on this compact instrument and each test features automatic wavelength selection. The entire multi-LED optical system is embedded in the light chamber and optimized for LaMotte test reagent systems. This enables the analyst to select a wavelength and read a reacted sample. The microprocessor, which selects the wavelength, also allows the user to load up to 25 tests for analyzing custom reagent systems. Features seven user selected languages. Comes with 6 sample tubes, USB wall/computer adapter and instruction manual.

Waterproof!

Code 1910

Optional Accessories

Description	Order Code	Ship Code
Small Field Carrying Case	1910-GCS150	NH (7)
Large Field Carrying Case	1910-GCS440	NH (9)
USB Cable	1720	NH (1)
USB Wall Adapter	1721	NH (1)
COD/UDV Adapter	1724	NH (1)
Car Charger	5-0132	NH (1)

SMARTLink 3 Program & Interface Cable

Order Code 1901-CD NH (1)

Interface the SMART3 Colorimeter and the 2020we Portable Turbidity meter with a Windows®-based personal computer. The program can be used to download data stored in the datalogger. The program allows the user to identify, organize, view, manipulate and store data as a database on a PC. Data can also be copied and pasted or exported to other applications as a CSV file.

Specifications

Light Source	LED/filter setup at 428nm, 525nm, 568nm, 635nm, 638nm
Detector	Photodiode
Display	160 x 100 Backlight LCD, 20 x 4 line graphic display
Range	0-125%T
Resolution	1% FS
Accuracy	2% FS
CE Mark	Yes
Sample Cell	25 mm round cell, 10 mm square cuvette, 16mm COD tubes
Power	USB computer/wall adapter or lithium ion rechargeable battery
Battery Life	Charge Life: Approx. 380 tests with backlight on to 1000 tests with backlight off. (Signal averaging diabled). Battery Life: Approx. 500 charges.
Datalogging	Up to 500 data points; USB transfer, time and date stamped
Calibration	Factory set-user adjustable
Keypad	6-button mechanical
Size	7.5 x 3.5 x 2.5 in / 19.1 x 8.9 x 6.4 cm
Weight	15 ounces

NEW!

Code 2000-02

SMART Spectro® 2 Spectrophotometer

Order Code 2000-02 NH (17)
(120V/60Hz and 220V/50Hz)

A spectrophotometer that is easy to use and more accurate than anything in its price range. With automatic wavelength selection, pre-programmed tests, and superior performance—this is the best spectrophotometer for the money!

Advanced Features

- wide wavelength range
- menu-driven display
- high resolution, exceptional accuracy
- automatic wavelength selection
- unique optical design system using a 1200 lines/mm grating
- pre-programmed tests
- portable, includes 6 sample tubes (25mm round), 2 sample cell holders (25mm round and COD, 10 mm cuvettes), AC adapter, battery charger, instruction manual including test procedures and Quick Start Guide
- Optional Bluetooth® Mobile printer

Standard Solutions

Test Factor	Size	Conc.	Code	Shipping
Ammonia- Nitrogen	60 mL	100 ppm	3871-H	NH
Chlorine	60 mL	250 ppm	6973-H	NH
Chlorine	60 mL	1000 ppm	3858-H	NH
Nitrate- Nitrogen	60 mL	1000 ppm	5392-H	NH
Phosphate	60 mL	1000 ppm	5393-H	NH
Sulfate	60 mL	2000 ppm	7120-H	NH
pH	120 mL	4.0 pH	2866-J	NH
pH	120 mL	7.0 pH	2881-J	NH
pH	120 mL	10.0 pH	2896-J	NH

Optional

Specifications

Wavelength Range:	350-1000 nm
Wavelength Accuracy:	±2 nm
Wavelength Resolution:	1 nm
Wavelength Bandwidth:	4 nm (max)
Photometric Range:	0-125%T, -0.3-2.500A
Photometric Accuracy:	±0.005A
Photometric Stray Light:	<0.4 %T @360 nm
Light Source:	Quartz halogen
Sample Chambers:	25 mm round cell, 10 mm square cuvette UDV, COD
Optical Mount:	Modified Ebert, 1200 grooves/mm ruled grating
Modes:	Conc., %T, ABS
Interface:	USB, Bluetooth® (Code 3-0066 mobile printer only)
Power:	110/220 volt or battery pack (rechargeable)
Weight:	4.65 kg (10.3 lb)
Size:	13.8 x 11 x 6.7 / 35.1 x 27.9 x 17 cm

Optional Accessories

Description	Order Code	Shipping
Carrying Case	2000-CS	NH (6)
Battery Pack with Holder (rechargeable)	2000-BP	NH (2)
Replacement Sample Cells (round)	0290-6	NH (1)
Cuvettes	29653-10	NH (1)
SmartLink3 Software with cable (See page 38)	1912-CD	NH (2)
COD Heater Block (for Total N & P analysis)	5-0102	NH (15)
Bluetooth® Mobile Printer	5-0066	NH (2)

SMART Spectro® 2 & SMART3 Reagent Systems

Test Factor	Test Method (# of reagents)	SMART Spectro® 2 Range ppm	SMART3 Colorimeter Range ppm	# of Tests	Order Code	Shipping
Alkalinity UDV †	Unit Dose Vial (1)	15-200	10-250	100	4318-J	NH
Aluminum	Eriochrome Cyanine R (4)	0.01-0.30	0.01-0.30	50	3641-01-SC	NH
Ammonia Nitrogen (Fresh & Salt Water)	Salicylate (3)	0.02-1.00/ 0.10-1.00	0.05-1.00/ 0.10-1.00	25	3659-01-SC	R2
Ammonia Nitrogen HR	Nesslerization (2)	0.05-4.00	0.05-4.00	50	3642-SC	R1
Barium	Barium Chloride (1)	----	5-200	50	3638-SC	NH
Benzotriazole	UV Photolysis (4)	----	0.5-30.0	50	4047-01	R1
Biquinide	Colorimetric (1)	5-70	2-70	50	4044	NH
Borate UDV†	Unit Dose Vial (1)	----	5-80	100	4322-J	NH
Boron	Azomethine-H (2)	0.05-0.80	0.05-0.80	50	4868-01	NH
Bromine LR	DPD Tablets (3)	0.04-9.00	0.10-9.00	100	3643-SC	NH
Bromine UDV†	Unit Dose Vial DPD (1)	0.3-22.0	0.1-22.0	100	4311-J	NH
Cadmium	PAN (4)	0.02-1.00	0.02-1.00	50	4017-01	R1
Carbohydrazide	Iron Reduction (3)	0.005-0.900	0.04-0.90	100	4857	R1
Chloride TesTab	Argentometric (1)	0.5-30.0	0.4-30.0	50	3693-SC	NH
Chlorine (Free & Total)	DPD Tablets (3)	0.02-4.00	0.03-4.00	100	3643-SC	NH
Chlorine - Free UDV†	Unit Dose Vial (1)	0.10-10.00	0.10-10.00	100	4311-J	NH
Chlorine - Liquid DPD	DPD (3)	0.30-4.00	0.03-4.00	144	4859	R1
Chlorine - Total UDV†	Unit Dose Vial (1)	0.1-10.0	0.10-10.00	100	4312-J	NH
Chlorine Dioxide	DPD tablet/Glycine (2)	0.04-7.00	0.06-8.00	100	3644-SC	NH
Chromium (Hexavalent)	Diphenylcarbohydrazide (1)	0.01-1.00	0.01-1.00	100	3645-SC	HA
Chromium (Total, Hex & Trivalent)	Diphenylcarbohydrazide (5)	0.03-1.00	0.01-1.00	100	3698-SC	HF
Cobalt	PAN (3)	0.02-2.00	0.04-2.00	50	4851-01	HF
COD LR with Mercury *	Digestion (1)	5-150 mg/L	5-150 mg/L	25	0075-SC	R1
COD LR without Mercury *	Digestion (1)	5-150 mg/L	5-150 mg/L	25	0072-SC	R1
COD SR with Mercury*	Digestion (1)	50-1,500 mg/L	50-1,500 mg/L	25	0076-SC	R1
COD SR without Mercury*	Digestion (1)	50-1,500 mg/L	50-1,500 mg/L	25	0076-SC	R1
COD HR with Mercury*	Digestion (1)	500-15,000 mg/L	500-15,000 mg/L	25	0077-SC	R1
COD HR without Mercury *	Digestion (1)	500-15,000 mg/L	500-15,000 mg/L	25	0074-SC	R1
Color	Platinum Cobalt (0)	15-1,000 mg/L	20-1,000 Cu	∞	NA	NH
Copper BCA - LR	Bicinchoninic Acid (1)	0.05-3.50	0.04-3.50	50	3640-SC	NH
Copper - Cuprizone	Cuprizone (2)	0.01-2.00	0.03-2.00	50	4023	R1
Copper DDC	Diethyldithiocarbamate (1)	0.05-6.00	0.10-6.00	100	3646-SC	NH
Copper UDV†	Unit Dose Vial, Bicinchoninic acid (1)	0.20-4.00	0.1-4.0	100	4314-J	NH
Cyanide	Pyridine-Barbituric Acid (5)	0.05-0.50	0.03-0.35	50	3660-01-SC	R1
Cyanuric Acid	Melamine (1)	16-200	10-200	40	3661-01-SC	NH
Cyanuric Acid UDV†	Unit Dose Vial, Melamine (1)	5-150	10-150	100	4313-J	NH
DEHA	Iron Reduction (3)	0.005-0.700	0.01-0.70	100	4857	R1
Dissolved Oxygen (DO)	Winkler Colorimetric (3)	0.3-12.0	0.6-11.0	200	3688-SC	R1
Erythorbic Acid	Iron Reduction (3)	0.02-3.00	0.02-3.00	100	4857	R1

*Requires COD Heater Block, not included. Code 5-0087 See page 42
† Requires Accessory Package Code 1961 or Code 1962 (sold separately)
Shipping Codes listed in front of catalog.

SMART Spectro® 2 & SMART3 Reagent Systems

Test Factor	Test Method (# of reagents)	SMART Spectro® 2 Range ppm	SMART3 Colorimeter Range ppm	# of Tests	Order Code	Shipping
Fluoride	SPADNS (2)	0.1-2.0	0.1-2.0	50	3647-02-SC	R1
Hardness (Toal) UDV†	Unit Dose Vial (1)	10-500	10-500	100	4309-J	NH
Hydrazine	P-dimethylaminobenzalde-hyde (2)	0.010-0.750	0.01-0.75	50	3656-01-SC	NH
Hydrogen Peroxide LR	DPD (2)	0.02-1.50	0.02-1.50	100	3662-SC	NH
Hydrogen Peroxide HR	DPD (2)	1-60	1-60	100	4045-01	NH
Hydrogen Peroxide Shock	DPD (2)	4-225	10-225	100	4045-01	R2
Hydroquinone	Iron Reduction (3)	0.01-1.80	0.01-2.00	100	4857	R1
Iodine	DPD Tablets (2)	0.08-14.00	0.2-14.0	100	3643-SC	NH
Iron	Bipyridyl (2)	0.06-6.00	0.10-6.00	50	3648-SC	R1
Iron UDV†	Unit Dose Vial Bipyridyl (1)	0.07-10.00	0.1-10.0	100	4315-J	NH
Iron - Phenanthroline	1,10 Phenanthroline (2)	0.04-4.50	0.1-5.0	50	3668-SC	R1
Lead	PAR (5)	0.1-5.0	0.1-5.0	50	4031-01	R1
Manganese LR	PAN (3)	0.02-0.70	0.01-0.70	50	3658-01-SC	HF
Manganese HR	Periodate (2)	0.3-15.0	0.3-15.0	50	3669-SC	R1
Mercury	TMK (3)	0.02-1.50	0.01-1.50	50	4861-01	HF
Methylethylketoxime	Iron Reduction (3)	0.02-3.00	0.01-3.00	100	4857	R1
Molybdenum HR	Thioglycolate (3)	0.2-15.0	0.6-50.0	50	3699-03-SC	R1
Nickel	Dimethylglyoxime (6)	0.06-8.00	0.15-8.00	50	3663-SC	HF
Nitrate Nitrogen LR	Cadmium Reduction (2)	0.05-3.00	0.10-3.00	20	3649-SC	R1
Nitrate TesTabs	Zinc Reduction (1)	3-60	5-60	50	3689-SC	NH
Nitrate UDV†	Unit Dose Vial Zinc Reduction	----	2-80	50	4321-J	NH
Nitrite Nitrogen LR	Diazotization (2)	0.02-0.80	0.02-0.80	20	3650-SC	NH
Nitrogen, Total*	Chromotropic Acid/ Digestion (6)	2-25 mg/L	3-25 mg/L	25	4026-01	R1
Oxygen Scavengers	Iron Reduction	various	various	100	4857	R1
Ozone	DPD (3)	----	0.03-3.00	100	4881-01	NH
Ozone LR	Indigo Trisulfonate (3)	0.02-0.40	0.01-0.40	100	3651-SC	NH
Ozone HR	Indigo Trisulfonate (3)	0.05-1.50	0.05-2.50	20	3651-SC	NH
pH CPR	Chlorophenyl Red (1)	pH 5.0-7.0	pH 5.0-6.8	100	3700-01-SC	NH
pH PR	Phenol Red (1)	pH 6.6-8.4	pH 6.6-8.4	100	3700-01-SC	NH
pH TB	Thymol Blue (1)	pH 8.0-9.5	pH 8.0-9.5	100	3700-01-SC	NH
Phenol	Aminoantipyrine (3)	0.05-6.00	0.05-6.00	50	3652-01-SC	NH
Phosphate LR	Ascorbic Acid Reduction (2)	0.04-3.00	0.05-3.00	50	3653-SC	R2
Phosphate HR	Vanodomolybdovanadate Acid (1)	1.0-70.0	0.5-70.0	50	3655-SC	R1
Phosphorus, ppb	Ascorbic Acid/Digestion (5)	----	50-3000	50	3653-SC	R2
Phosphorus, Total - LR*	Ascorbic Acid/Digestion (5)	0.07-3.50 g/L	0.50-3.50 mg/L	25	4024-01	R1
Phosphorus, Total - HR*	Molybdovanadate/ Digestion (5)	5.0-100.0 mg/L	5-100mg/L	25	4025-01	R1
Potassium	Tetraphenylboron (2)	0.5-10.0	0.8-10.0	100	3639-SC	R1
Silica LR	Heteropoly Blue (4)	0.03-2.50	0.05-4.00	100	3664-SC	R1
Silica HR	Silicomolybdate (3)	1-50	1-75	50	3687-SC	R1
Sulfate HR	Barium Chloride (1)	5-100	3-100	100	3665-SC	R1
Sulfide LR	Methylene Blue (3)	0.02-1.00	0.06-1.50	50	3654-02-SC	R1
Surfactants	Bromthymol Blue (3)	0.5-8.0	0.5-8.0	100	4876-01	HF
Tannin	Tungsto-Molybdophosphoric Acid (2)	0.2-10.0	0.1-10.0	50	3666-01-SC	R1
Tolyltriazole	UV Photolysis (4)	----	0.5-30.0	50	4047-01	R1
Turbidity	Absorptimetric (0)	2-400 FTU	3-400 FTU	∞	NA	NH
Zinc LR	Zincon (6)	0.03-3.00	0.05-3.00	50	3667-SC	HF

*Requires COD Heater Block, not included. Code 5-0087 See page 42
† Requires Accessory Package Code 1961 or Code 1962 (sold separately)
Shipping Codes listed in front of catalog.

SMART3 Water Analysis Laboratory

Order Code 1951-03 LQ (37)

Reagent Refill R-1951-03 LQ (10)

- measure 24 water quality parameters with this versatile portable lab!
- analyzes test sample color and provides direct readouts for 15 factors
- direct reading titrators provide results for 6 additional factors directly in ppm
- includes digital meters to measure pH, conductivity and TDS
- the SMART3 Colorimeter is programmed to provide direct readouts for over 80 factors using optional reagent packages

Meters

Test Factor	Code	Model	Range
pH	5-0034-01	pH5 Plus	pH 0-14
Conductivity	5-0038-02	CON6 Plus CON6	0-1999 µS/cm 2.00-19.99 mS
Colorimeter	1910	SMART3	See chart

Test Factors

Test Factor	Test Method	Range (# Test)
Alkalinity	Neutralization	0-200 ppm (50 at 200 ppm)
Carbon Dioxide	Neutralization	0-50 ppm (50 at 50 ppm)
Chloride/Salinity	Argentometric	0-200 ppm (50 at 200 ppm)
Dissolved Oxygen	Winkler Method	0-10 ppm (50 at 10 ppm)
Hardness (Calcium, Magnesium,& Total)	Complexometric	0-200 ppm (50 at 200 ppm)

Also Available

Description	Order Code	Shipping
SMART3 Colorimeter Lab without pH, Conductivity Meters	1991-01	LQ (34)
Reagent Refill	R-1991	LQ (10)

SMART3 Colorimeter Tests

Test Factor	Test Method	Range (# Test)
Ammonia-Nitrogen	Salicylate	0.5-4.0 ppm (50)
Chlorine	DPD	0.03-4.0 ppm (100)
Bromine	DPD	0.10-9 ppm (100)
Iodine	DPD	0.2-14 ppm (100)
Chromium (Hexavalent)	Diphenylcarbohydrazide	0.01-1.0 ppm (100)
Copper	Diethyldithiocarbamate	0.10-6.0 ppm (100)
Fluoride	SPADNS	0.1-2.0 ppm (50)
Iron	Bipyridyl	0.10-6.0 ppm (50)
Nitrate-Nitrogen	Cadmium Reduction	0.10-3.0 ppm (20)
Nitrite-Nitrogen	Diazotization/Coupling	0.20-0.8 ppm (20)
Phosphate	Ascorbic Acid Reduction	0.05-3.0 ppm (50)
Silica	Heteropoly Blue	0.05-4.0 ppm (50)
Sulfate	Barium Chloride	3-100 ppm (50)
Sulfide	Methylene Blue	0.06-1.50 ppm (50)
Turbidity	Absorption (no rgts)	3-400 NTU (∞)

Code 1951-03

Fresh Water Outfit

Grades 6 and up

Order Code 3633-05 262.00 R3 (10)

Reagent Refill R-3633-05 164.60 R3 (4)

Healthy aquariums require routine water quality tests to maintain proper water balance. This outfit contains all you need!

Octa-Slide 2 Comparator Tests

Test Factor	Test Method	Range (# Tests)
Ammonia Nitrogen	Salicylate	0.0-2.0 ppm (50)
Nitrite Nitrogen	Diazotization/ Coupling	0.05-0.8 ppm (50)
pH	Wide Range	5.0-10.0 ppm (50)

Direct Reading Titrator Tests

Test Factor	Test Method	Range (# Tests)
Alkalinity, Total	Neutralization	0-200 ppm (50)
Carbon Dioxide	Neutralization	0-50 ppm (50)
Chloride	Argentometric	0-200 ppm (50)
Dissolved Oxygen	Winkler Method	0-10 ppm (50)
Hardness (Total)	Complexometric	0-200 ppm (50)

Temperature

Test Factor	Range
Armored Thermometer	–5° to 45°C

Every Classroom Should Have An Aquarium!

All the necessary labware, accessories, and reagents for 50 tests of each key test factor are contained in a rugged carrying case. Each outfit provides a diagrammed instruction manual and a handy short form instruction mounted in the case lid.

Code 3633-05

Salt Water Outfit

Grades 6 and up

Order Code 3635-05 R2 (10)

Reagent Refill R-3635-05 R2 (4)

Contains equipment necessary to monitor the 9 parameters most critical to the salt water analyst. Same packaging as shown, with 50 tests for each factor.

Code 3635-05

Octa-Slide 2 Comparator Tests

Test Factor	Test Method	Range (# Tests)
Ammonia Nitrogen	Salicylate	0.0-2.0 ppm (50)
Nitrate Nitrogen	Cadmium Reduction	0.25-10.0 ppm (40)
Nitrite Nitrogen	Diazotization/ Coupling	0.05-0.8 ppm (50)
pH	Wide Range	5.0-10.0 (50)

Direct Reading Titrator Tests

Test Factor	Test Method	Range (# Tests)
Alkalinity	Neutralization	0-200 ppm (50)
Carbon Dioxide	Neutralization	0-50 ppm (50)
Dissolved Oxygen	Winkler Method	0-10 ppm (50)
Salinity	Argentometric	0-20 ppt (50)

Temperature

Test Factor	Range
Armored Thermometer	–5° to 45°C

NEW!

Aquaponics

Grades 5 and up

Order Code 3637 LQ (9)

Reagent Refill R-3637 LQ (4)

Aquaponics is growing rapidly as a hobby and as an industry as the farm-to-table trend continues to spread. Designed for small to mid-size systems, this test kit monitors basic water quality for both the aquaculture and hydroponics segments of your system. A detailed, diagrammed instruction manual is provided along with a quick reference lid instruction. Reagents, labware and accessories are mounted in a foam-lined carrying case. Kit is complete with labware, accessories, and reagents to perform approximately 50 repetitions per test factor. Test chemistries and comparators are compatible with fresh, brackish, or salt water systems.

Code 3637

Octa-Slide 2 Comparator

Test Factor		Range
Ammonia-N	Salicylate	0-2.0 ppm
Nitrite-N	Diazotization/Coupling	0.05-0.8 ppm
Nitrate-N	Zinc Reduction	0-15 ppm
pH	Wide Range Indicator	5.0-10.0
Iron, Ferrous & Ferric	Bipyridyl indicator	0.5-10.0 ppm

Direct Reading Titrator

Test Factor		Range
Alkalinity	Acid/Base	0-200 ppm
Dissolved Oxygen	Modified Winkler	0-10 ppm

Code 3561-01

Hydroponics 4-Way Kit

Grades 6 and up

Order Code 3561-01 HF (7)

Reagent Refill R-3561 HF (3)

Maintain proper nutrient balances and achieve optimum growing conditions in soil-less cultures. An abbreviated version of our popular Hydroponics Combination Kit (5406).

- offers tests for pH and three key nutrient factors: nitrogen, phosphorus and potassium
- sufficient reagents for 50 tests per factor
- complete labware in a sturdy case
- *Plant Nutrition Studies* handbook

Octa-Slide 2 Comparator Tests

Factor	Range	# Tests
pH	4.5-8.0	50
Phosphorus	3-30 ppm	50
Nitrate Nitrogen	5-200 ppm, by dilution	50

Soil Macronutrients

Grades 6 and up

Order Code 5928-01 HF (17)

Reagent Refill R-5928 HF (7)

Learn the preparation, extraction and filtration techniques and procedures developed specifically for the testing of soil nutrients. This is a comprehensive introduction to the study of soil properties.

- an easy-to-use soil sampling tube
- soil sampling bags
- Soil Texture Unit (page 51)
- individual test modules for 4 important soil test factors

Octa-Slide 2 Comparator

Test Factor	Range	# Tests
pH	3.8 -9.6	40

Color Chart

Test Factor	Range	# Tests
Nitrogen	10-150 lb/acre	50
Phosphorus	10-200 lb/acre	50

Turbidity Column

Test Factor	Range	# Tests
Potassium	100-400 lb/acre	30

Accessories

Description	Code	# Tests
Soil Texture Unit	1067	50
Soil Sample Bags	0615-J	50
Soil Sampling Tube	1055	50

Code 5928-01

Soil Micronutrients

Grades 6 and up

Order Code 5938-02 R1 (19)

Reagent Refill R-5938-01 R1 (5)

A great supplement to the Soil Macronutrients Outfit includes individual test modules for 9 test factors.

Color Chart

Test Factor	Range	# Tests
Aluminum	5-150 ppm	50
Ammonia	5-150 ppm	50
Calcium	150-2800 ppm	50
Chlorides	25-500 ppm	50
Iron	5-125 ppm	50
Magnesium	5-150 ppm	50
Manganese	4-40 ppm	50
Nitrite	1-50 ppm	50
Sulfate	50-200 ppm	50

Code 5938-02

GLOBE

NPK Soil Test Kit

Grades 5 and up

Order Code 3-5880 NH (1)

Specifically designed to meet the needs of the GLOBE Program™, this kit is safe, fun and can easily ship anywhere!

- 50 tests each for nitrogen, phosphorus and potassium
- uses TesTabs®
- all necessary apparatus
- simple, diagrammed instructions
- laminated color chart

Code 3-5880

Soil pH TestTabs® Kit

Grades 5 and up

Order Code 5912 NH (1)

TesTab® kit for measuring pH. Ideal for younger students and teachers who would like an alternative to liquid pH indicators. Ideal companion to Soil NPK kit (Code 3-5880).

- simple diagrammed instructions
- laminated color chart
- 50 tests for pH
- wide range 4-11 in 1.0 pH units
- distilled or deionized water recommended

Code 5912

Code 5024

Soil pH Test Kit

Grades 5 and up

Order Code 5024 NH (1)

Reagent Refill 2221-F NH (1)

Our most popular pH soil kit. Supplied with a color chart and plastic spot plate. pH affects all mineral elements and the biological process made available to plants from the soil. Accurate pH testing is essential to determine lime requirements and to insure that a mineral-rich soil is also a fertile one. 100 tests.

Soil Sampling Bags

Order Code 0615-J NH (1)

Directions printed right on the bag explain how to collect and to prepare soil samples! The 6 x 4 inch (15 x 10 cm) plastic zipper bags prevent contamination or accidental mixing of samples ensuring accurate test results. Package of 100.

Code 0615-J

Plant Tissue

Plant tissue testing provides essential information concerning plant use of nutrients vital to their growth. These kits indicate if growing plants are receiving adequate amounts of available nutrients from the soil.

Plant Macronutrient Kit

Grades 6 and up

Order Code 5026-01 LQ (3)

Reagent Refill R-5026 LQ (2)

Students perform colorimetric tests for nitrogen, phosphorus and potassium from plant tissue liquid extracts. Quantitative results given as abundant, adequate and deficient only. 50 tests per factor.

Colorimetric Tests

Nitrogen	Phosphorus	Potassium

Plant Micronutrient Kit

Grades 6 and up

Order Code 5261-01 R1 (3)

Reagent Refill R-5261 R1 (2)

Students extract sap onto filter paper from freshly cut plant tissue, then perform color spot tests for boron, copper, ferrous and ferric iron, manganese and zinc. Indicates presence/absence only. 50 test per factor, 25 for Boron.

Color Spot Tests

Boron	Copper	Ferrous/Ferric Iron
Manganese	Zinc	

Code 5026-01

Code 5940

Plant Nutrition Solutions

Grades 6 and up

Order Code 5940 R2 (7)

Contains 10 stock solutions of macronutrients and trace elements—sufficient to prepare five liters of each mixture. Includes *Plant Nutrition Studies* handbook.

Find us on Facebook

Code 5679

Garden Guide Kit

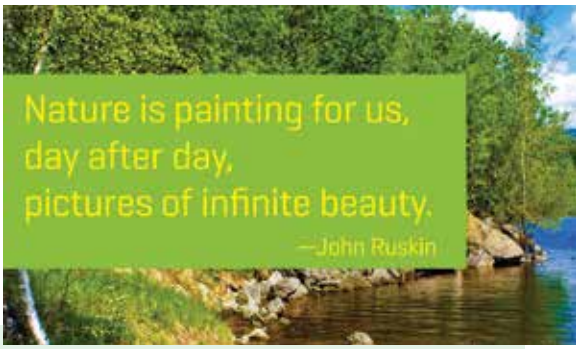
Grades 5 and up

Order Code 5679-01 R2 (4)
Reagent Refill R-5679-01 R2 (3)

Daffodils drooping? Spinach looking sad? Need to test your garden soil? Use this simple economical kit to measure nitrogen, phosphorus, potassium (15 tests each) and soil pH (30 tests).

- diagrammed instructions
- laminated color charts
- *Garden Guide* manual
- *LaMotte Soil Handbook*
- *A Study Of Soil Science*

Code 1067



Soil Texture Unit

Order Code 1067 NH (2)
Reagent Refill R-1067 NH (1)

A great kit for testing and demonstrating different soil textures and properties. Students test soil from the schoolyard, or can compare soil samples brought from home. 50 tests.

AP

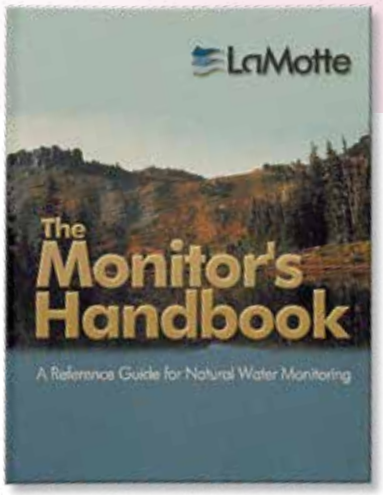
Soil Sampling Tube

Order Code 1055 NH (2)

A 12" galvanized steel sampler with a 1" core diameter, saw-toothed tip. A cut-away side allows examination of core prior to removal for testing. Come with 20 soil sampling bags.

Code 1055

HANDBOOKSRESOURCES



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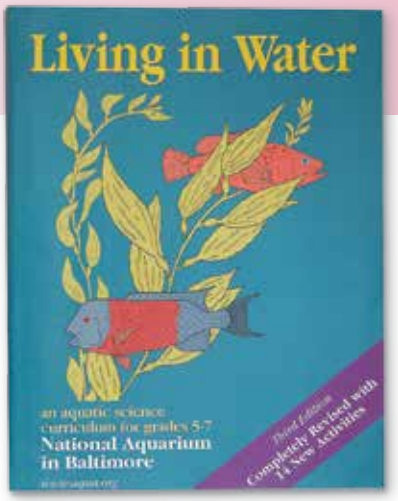

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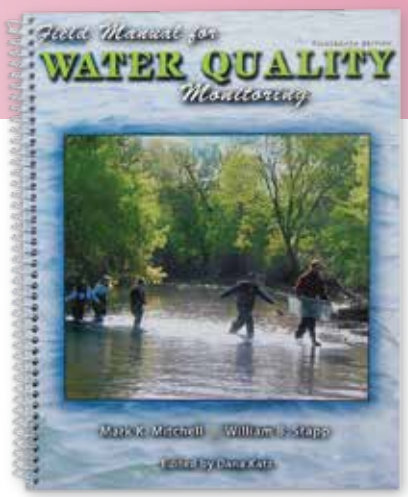


Code 3-1508

The Monitor's Handbook

A Reference Guide for Natural Water Monitoring

Staff, LaMotte Company

Order Code 1507

A valuable water quality analysis reference guide, providing comprehensive overviews of monitoring streams, lakes, rivers and estuaries. Includes physical, biological and chemical factors of water quality and analytical procedures for their measurements. The basics of waterway surveying, program planning, data reporting and analyzing are also described. 71 pages.

Living in Water

Department of Education at the National Aquarium in Baltimore

Order Code 1598

An aquatic science textbook containing 50 activities that integrate physical, earth and life science. It can be used as a complete curriculum or individual activities. Classroom based scientific studies of water, aquatic environments and the plants and animals that live in water. Field studies can be adapted for use in any body of water form the ocean to a fish bowl. 395 pages.

Field Manual for Water Quality Monitoring

Mark K. Mitchell, William B. Stapp

Order Code 3-1508

Serves as the standard text for school-based water quality monitoring programs in schools around the world. The manual describes nine water quality tests: dissolved oxygen, fecal coliform, pH, total solids, total phosphorus, nitrates, turbidity, biochemical oxygen demand, and temperature. Also includes chapters on heavy metals testing, land use practices and computer networking. The current edition specifically features LaMotte water quality test kits. 145 pages.

A Study Of Soil Science

Dr. Henry D. Foth

Order Code 1530

An introduction to soil formation, soil pH, mineral elements, plant nutrition, the life cycle of growing plants, and soil fertility management. 44 pages.

The LaMotte Soil Handbook

Staff, LaMotte Company

Order Code 1504

A manual for both "growers" and soil investigators! Provides information on major and minor nutrients, trace elements, soil pH, organic matter and soil texture. Also includes lime and fertilizer recommendations for a variety of crops and plants. 60 pages.

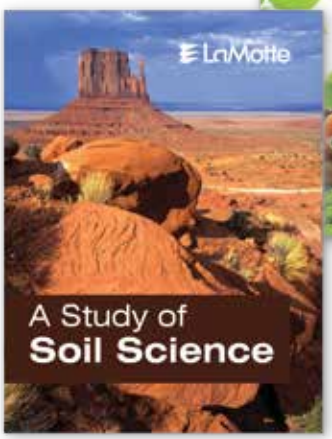
Plant Nutrition Studies

Dr. Robert Stegner

Order Code 1596

A study of hydroponics. Includes a series of laboratory procedures and open-ended investigations. 76 pages.

Code 1504



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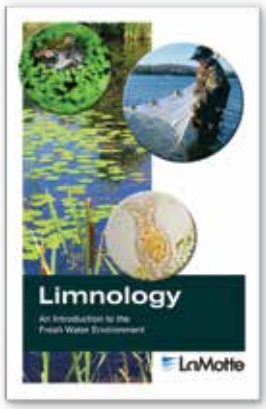

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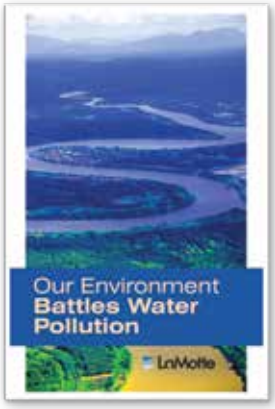

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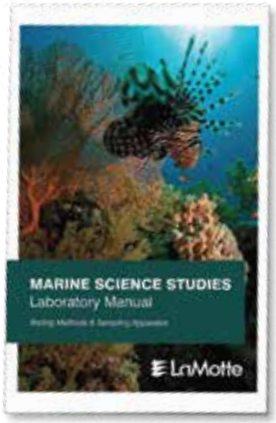

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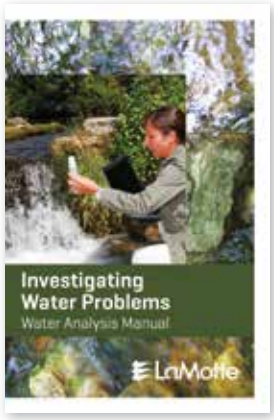

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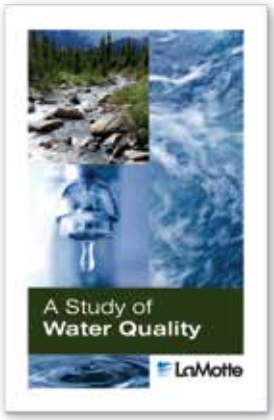

Code 1532

Limnology: An Introduction To The Fresh Water Environment

William H. Amos

Order Code 1593

A concise handbook dealing with biological, chemical and physical processes of fresh water including stream dynamics, plant zonation, energy cycle of ponds and much more. 40 pages.

Our Environment Battles Water Pollution

Dr. Charles E. Renn

Order Code 1592

Follow a theoretical river from its origin to its discharge. Includes discussion of the chemical and biological changes that occur as the river reacts to impurities from natural and industrial sources. 32 pages.

A Laboratory Manual For Marine Science Studies

Staff, LaMotte Company

Order Code 1587

A detailed guide of sampling procedures and water quality analysis in salt water environments, including description of reagents, labware and test procedures. 32 pages.

Investigating Water Problems

Dr. Charles E. Renn

Order Code 1589

A comprehensive handbook describing 25 water quality test factors including analytical procedures, test result interpretation, illustrations and helpful glossary. 72 pages.

A Study Of Water Quality

Dr. Charles E. Renn

Order Code 1532

Examines in-depth the life cycle of water from natural occurences to treatment for domestic/industrial use. Emphasizing problems such as scaling, corrosiveness, taste and turbidity. 46 pages.

FREERESOURCES

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Check out our website for New Education/Environmental Science Grant Sources and deadlines. Learn how to get money for your school from an experienced grant recipient!

Find us on Facebook

BioPaddles® Colony ID™ Lite app

Free app for iPads lets users compare colony examples on BioPaddle agar types from 5 microhabitats (air, water, soil, surface and food). Also contains information regarding organisms, microbiological techniques, and more!

INDEX

Photo Contest

The LaMotte Company Science Education Photo Contest is an opportunity to win **FREE LaMotte equipment** for your school, educational program or volunteer monitoring group. Many winners appear in upcoming LaMotte catalogs and publications, or on the website. Please read and follow the guidelines below when planning and submitting your entry.

- Photo(s) must show current LaMotte testing products being properly used by students in the classroom, lab or outdoors. Safety equipment (gloves, goggles, tec.) must be worn when applicable.
- Please indicate a brief description of how LaMotte products are used in your program.
- Photo(s) should be good quality black and white, color slides, or color prints (please include negatives). Digital files should be high resolution (300 ppi) and supplied on disk or CD. All submissions must be accompanied by a completed entry form and signed photo release. Call LaMotte or visit our website www.lamotte.com for entry and release forms.
- Submissions must reach the LaMotte Company advertising office by the **Friday after Thanksgiving** to be eligible for prizes.
- Prizes will only be awarded to educational institutions and organizations.
- All submissions become the property of LaMotte Company. Please send original photos, slides or hi-res digital photos. Make copies for your use before submitting. Sorry, but submitted photos and slides cannot be returned.
- Winners will be notified by the end of February.
- All prizes are merchandise certificates for LaMotte equipment.

First Place! $500 Merchandise Certificate

Second Place! $250 Merchandise Certificate

Third Place! $100 Merchandise Certificate

3 Honorable Mentions $50 Merchandise Certificate (Each)

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www.lamotte.com

Prices

Are subject to change without prior notice. Prices are f.o.b. Chestertown, Maryland.

Payment Terms

Are net thirty days to accounts with established credit with LaMotte Company. New accounts should provide credit references or enclose payment with the purchase order. VISA/MasterCard/AMEX accepted.

Product Code Numbers

Please include product code numbers and quantities.

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