

The University of New Mexico



PROMOTING SCIENCE, TECHNOLOGY, ENGINEERING, MATH & HEALTH EDUCATION



# Scientific Equipment Lending Library Catalog of Items

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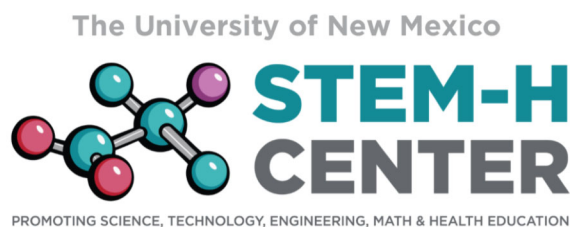
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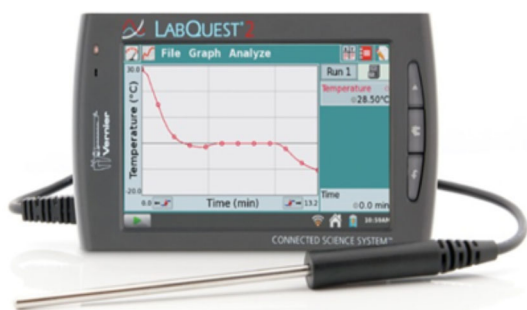
# UNM STEM-H CENTER

## LENDING LIBRARY POLICIES & PROCEDURES

In support of STEM education in the state of New Mexico, the UNM STEM-H Center maintains a Lending Library to provide access to materials and technology that otherwise may be unavailable to area educators and students. There is no charge associated with borrowing these materials and equipment.

- All requests for equipment must be made at least 3 business days in advance by email (scifair@unm.edu) or submitting the [online request form](#). Materials are available on a first come, first serve basis. Special circumstances may be accommodated.
- The standard loan period is two weeks, defined as the day borrowed to the same day of the week two weeks later. Loans may be extended providing there is no waiting list and that an extension will not interfere with an existing reservation.
- The borrower(s) is responsible for arranging pick-up and drop-off of borrowed items. Special arrangements may be made for delivery and pick-up of items by the Center staff on a case by case basis and within a 25 mile radius of UNM.
- Training for certain items may be required before the borrower is allowed to check them out. The Center will provide periodic training classes for these items.
- The loaned equipment remains the property of the UNM STEM-H Center and must be returned in the condition in which it was borrowed. While the Center is responsible for inspection of equipment during check-out and check-in, it is the expectation and responsibility of the individual borrowing the equipment to check for damage or missing pieces before leaving and to report missing or damaged equipment upon return.
- The equipment may not be loaned, sold, or otherwise disposed of, or used by other persons than the borrower/intended user(s), without express written approval of the UNM STEM-H Center. The Center shall not be liable for any claims, liabilities, damages, losses, costs, expenses (including but not limited to settlements, judgments, court costs and reasonable attorney's fees, fines and penalties) arising out of the use of an item borrowed.
- The individual borrowing equipment assumes full responsibility of the equipment and will be held accountable for the cost of lost or damaged items while in his/her possession. S/he will be charged for any damage or loss to the extent that further usage is impaired or impossible without replacement or repair.

Failure to comply with the terms of this agreement may prevent future eligibility for loans and other services of the UNM STEM-H Center.



## Lab Quest 2

Vernier LabQuest 2 is a standalone interface used to collect sensor data with its built-in graphing and analysis application. The large, high-resolution touch screen makes it easy and intuitive to collect, analyze, and share data from experiments. Its wireless connectivity encourages collaboration and personalized learning. You can also use LabQuest 2 as a computer interface using Logger *Pro* software for advanced analysis and video features..

Quantity Available: 10

## Data-Collecting Probes and Sensors (compatible with the Lab Quest 2)



## Colorimeter

This 4-wavelength Colorimeter measures the amount of light transmitted through a sample at a user-selectable wavelength in order to determine the concentration of a solution. Features such as automatic sensor identification and one-step calibration make this sensor easy to use. Fifteen 3.5 mL cuvettes are included.

Quantity Available: 10



## CO<sub>2</sub> Gas Sensor

With this sensor, you can easily monitor changes in CO<sub>2</sub> levels occurring in respiration of organisms ranging from peas to humans. The CO<sub>2</sub> Gas Sensor measures gaseous carbon dioxide in two ranges: -0 to 10,000 ppm and 0 to 100,000 ppm. A 250 mL respiration chamber with probe attachment is included for running controlled experiments with small plants and animals.

Quantity Available: 10



## Conductivity Probe

The Conductivity Probe has three ranges, providing optimal precision in Uses include: demonstrating diffusion of ions through membranes; investigating the difference between ionic and molecular compounds, strong and weak acids, or ionic compounds that yield different ratios of ions; and measuring TDS, total dissolved solids.

Quantity Available: 10



## Dissolved Oxygen Probe

The Dissolved Oxygen Probe is great for biology, chemistry, ecology, or integrated science courses. It can be used to perform a wide variety of experiments to determine changes in dissolved oxygen levels, one of the primary indicators of the quality of an aquatic environment. Calibrate in the units you choose: % dissolved oxygen, mg/L, or ppm dissolved oxygen.

Quantity Available: 10



### Dual-Range Force Sensor

The Dual-Range Force Sensor is a general-purpose sensor for measuring pushing and pulling forces. Two ranges allow you to measure forces from 0.01 newtons to 50 newtons. It can be used in a broad range of ways: as a replacement for a hand-held spring scale; mounted horizontally on a dynamics cart to study collisions; mounted on a ring-stand to measure forces in a vertical direction; collect data from two Force Sensors simultaneously to study Newton's Third Law.

Quantity Available: 10



### Gas Pressure Sensor

The Gas Pressure Sensor can be used to monitor pressure changes in a gas. The range is wide enough to perform Boyle's law yet it is sensitive enough to conduct vapor-pressure or pressure-temperature experiments. Biology teachers can use the Gas Pressure Sensor to monitor transpiration or respiration in an enclosed environment.

Quantity Available: 10



### Hand-Grip Heart Rate Monitor

The Hand-Grip Heart Rate Monitor is ideal for continuously monitoring heart rate before, during, and after exercise or while a person is stationary. Hand grips do not require electrodes or clips. Easy to clean and share between students.

Quantity Available: 10



### Light Sensor

The Light Sensor approximates the human eye in spectral response. Use it for inverse square law experiments or for studying polarizers, reflectivity, or solar energy.

Quantity Available: 10



### Low-G Accelerometer

The Low-g Accelerometer is the best choice for most acceleration experiments, including Newton's second law, simple harmonic motion, and the relationship between acceleration and force. It can also be used to study one-dimensional motion of a car (real and toy), an elevator, a pendulum bob, or an amusement park ride.

Quantity Available: 10



## Magnetic Field Sensor

This sensor uses a Hall effect transducer, and measures a vector component of the magnetic field near the sensor tip. It has two ranges, allowing for measurement of relatively strong magnetic fields around permanent magnets and electromagnets, as well as measurement of weak fields such as the Earth's magnetic field. The articulated sensor tip allows you to measure both transverse and longitudinal magnetic fields.

**Quantity Available:** 10

## Microphone

Collect data with the Microphone to display and study the waveforms of sounds from voices and musical instruments. It also works well for speed of sound experiments.

**Quantity Available:** 10

## Motion Detector

The Motion Detector uses ultrasound to measure the position of carts, balls, people, and other objects. Measure objects as close as 15 cm and as far away as 6 m. Sensitivity switch reduces noise and produces higher quality data for studying dynamics carts on tracks. Pivoting head allows for flexibility in the experiment setup.

## pH Sensor

Use the pH Sensor just as you would a traditional pH meter with the additional advantages of automated data collection, graphing, and data analysis. Typical activities using our pH sensor include: acid-base titrations; studies of household acids and bases; monitoring pH change during chemical reactions or in an aquarium as a result of photosynthesis; investigations of acid rain and buffering; analysis of water quality in streams and lakes.

**Quantity Available:** 10

## Stainless Steel Temperature Probe

The Stainless Steel Temperature Probe is a rugged, general-purpose temperature sensor that can be used in organic liquids, salt solutions, acids, and bases. Use it as you would use a thermometer for experiments in chemistry, physics, biology, Earth science, and environmental science.

**Quantity Available:** 10

## Voltage Probe

The Voltage Probe is a bipolar sensor used to measure direct voltage. The black lead is grounded along with the interface, and the sensor reports the potential difference between the red lead and ground. It can be used to measure the potential in DC or AC circuits.



## Lab Books: Curriculum for the LabQuest2 & Sensors

### All Vernier Lab Books feature the following:

- Complete student experiments with materials list, step-by-step instructions, data tables, and questions.
- Teacher Information section for each experiment with complete directions for setting up experiments, helpful hints, and sample graphs and data.
- Word-processing files of the student sections on a CD so that any experiment may be easily edited to your specifications (Microsoft Word for Macintosh and Windows files).
- Experiments that directly correlate to state standards.
- Lab activities are matched to the tables of contents in dozens of popular textbooks.

*Please note that you will NOT be allowed to check out the actual books. You may browse through them and make copies, here at our office, of the lessons you want. If you want to use any of the files on the accompanying CD, please bring a USB drive and we will copy the digital files onto the USB drive for you.*

**Advanced Biology with Vernier** contains 17 ready-to-use labs including all 12 recommended AP\* Biology labs with complete instructions for data collection. The first 12 experiments have a direct 1-to-1 correlation with the 12 labs in the AP Biology Lab Manual.

**Advanced Chemistry with Vernier** has 35 advanced chemistry experiments designed. The first 22 experiments have a 1-to-1 correlation with the 22 experiments recommended by AP\* for AP Chemistry courses. There are four student alternative versions included for each experiment: computer, calculator, and a generic version that covers all platforms. Experiments are included for the Vernier Temperature Probe, pH Sensor, Conductivity Probe, Drop Counter, Colorimeter, Gas Pressure Sensor, Current Probe, ORP Sensor, and Radiation Monitor.

**Advanced Physics with Vernier—Mechanics** is the first of a two volume set and has experiments for the more in-depth introductory physics course. Experiments are designed for an interactive teaching style, with planned moments for instructor or student-led discussion. Instructor notes include discussion on how to lead students to a successful activity. The book includes many extensions to challenge the most talented students.

**Advanced Physics with Vernier—Beyond Mechanics** is the second of two volume set (see above) and is recommended for college physics, AP or IB Physics.

**Agricultural Science with Vernier** contains a collection of 29 experiments that can be useful in teaching agricultural science at the high school or college level. Some experiments are designed to be done in the field, and some in the classroom or laboratory. Topics include: Fundamentals of Agricultural Science, Plant and Soil Science, Animal Science, Energy and Electricity, General Topics in Agricultural Science.

**Biology with Vernier** has 31 experiments in cell respiration, photosynthesis, membrane diffusion, osmosis, human physiology, transpiration, fermentation, and other important biology concepts. The complete table of contents is shown below. Experiments are included for 12 Vernier biology sensors. This book supports seven AP\* Biology lab activities.

**Chemistry with Vernier** has more than 36 experiments in thermochemistry, gas laws, acid-base reactions, equilibrium, electrochemistry, electrolytes, states of matter, and more. Experiments are included for the Gas Pressure Sensor, Temperature Probe, pH Sensor, Conductivity Probe, Colorimeter, and Voltage Probe.

**Earth Science with Vernier** contains 33 experiments and 6 projects covering topics in Geology, Soil Analysis, Water Quality, Hydrology, Meteorology and Energy.

**Elementary Science with Vernier** has activities that investigate the topics of temperature, motion, force, magnetism, light, electricity, and pressure. Also included are lots of teacher tips, black-line masters, and clear illustrations to facilitate student understanding.

**Forensics with Vernier** Containing lab activities dealing with various aspects of forensic science, each lab is preceded by a short scenario that introduces the concepts or methods to be addressed in the lab. These introductory sequences are designed to “hook” the students and show them situations that require various forensic techniques. The Case Analysis questions for each activity relate to the concepts and techniques addressed in the lab, and many require the students to “solve” the crime introduced in the scenario with the data they collect.

**Human Physiology with Vernier** has experiments designed to encourage students to think about the physiology of various human organ systems by measuring the activity of the upper respiratory tract, the lungs, the heart, the nervous system, and the musculoskeletal system. Homeostasis is an underlying theme, and several experiments illustrate the response of the human body to stress or external influences.

**Lets Go Investigating Temperature** Aimed especially for elementary teachers, this lab book contains ten engaging temperature experiments. Included in this book are activities for grade 2 through 5, easy-to-use, black-line masters, lots of teacher tips and clear illustrations to facilitate understanding. Let's Go! Investigating Temperature is aligned with National Science Standards and Benchmarks.

**Middle School Science with Vernier** was written specifically for students in grades 6-8. It contains 38 experiments in Earth science, life science, and physical science, making use of ten different Vernier middle school sensors. Your students will really enjoy doing these well-written and well-tested science experiments!

**Organic Chemistry with Vernier** makes it easy for organic chemistry instructors to integrate Vernier data-collection technology into the organic chemistry lab curriculum. The experiments involve characterization of reactions and compounds using the Vernier Melt Station, Mini Gas Chromatograph, SpectroVis Plus, and the Polarimeter.

**Physical Science with Vernier** contains 40 ready-to-use experiments for physical science (middle school through grade 10). Experiments are included for 9 Vernier physical science sensors in chemistry and physics. These experiments are perfect for introductory physical science and integrated science classes!

**Physics with Vernier** has 35 experiments in mechanics, sound, light, electricity, and magnetism. This book has a wide variety of experiments for Motion Detectors, Force Sensors, Light Sensors, Magnetic Field Sensors, Microphones, Current & Voltage Probes, Photogates, Temperature Probes, and Accelerometers.

**Real World Math with Vernier** includes 32 activities covering concepts such as linear, quadratic, and periodic functions, statistics, systems of equations, and many more. The activities found in the printed book are written for use with TI-Nspire™ technology. The book includes a CD with editable Word files for all the activities in the book. The CD also contains versions of the activities for EasyData, DataMate, and Logger Pro.

**Water Quality with Vernier** has 16 water quality tests, including pH, total dissolved solids, dissolved oxygen, BOD, flow rate, turbidity, nitrates, and phosphates. All nine tests in the Water Quality Index (WQI) are supported. A comprehensive introduction is included for each test, providing important background information for the students.

**Ciencias con lo Mejor de Vernier** includes 42 experiments from 5 subject areas (Biology, Chemistry, Physics, Earth Science and Water Quality) for Spanish-speaking science education in both middle and high school.

**Ciencia en la Primaria con Vernier** includes 43 ready-to-use activities for Spanish-speaking elementary science education. Activities investigate the topics of temperature, motion, force, magnetism, light, electricity, and pressure. Also included are lots of teacher tips, black-line masters, and clear illustrations to facilitate student understanding.

**Den of Inquiry Volume 1** is a collection of 15 labs for introductory physics. These labs pay special attention to data analysis and mathematical modeling, but they do not use any sensors. Students enter the data directly into a computer or handheld; the book includes files and instructions for Logger Pro and for Fathom Dynamic Data Software™. Each lab includes extensive teacher notes and blackline masters for the students' predictions, instructions for the lab and for data analysis, and follow-up questions. Many labs also include pre-lab activities, extensions to the labs themselves, and strategies for making the labs more open-ended.

**Den of Inquiry Volume 2** is a collection of 16 sensor-based activities for introductory physics. Topics include kinematics, mechanics and energy; activities emphasize data analysis and modeling. Either Fathom 2.1 or Logger Pro software can be used. Each lab includes blackline masters for student handouts and extensive teacher notes, including extensions and options for making the activities more open-ended.





### 50 Piece Magnet Set

This useful magnet set contains 50 magnets of various sizes and shapes, such as ceramic ring, disks, bars rectangular ring and alnico cylindrical magnets. Great for sciences projects of all shapes and sizes!

**Quantity Available:** 23 sets



### Calibration Weight Set

- Chrome-plated steel weights
- 1000 total weight
- 8pcs: 1 x 10g, 2 x 20g, 1 x 50g, 2 x 100g, 1 x 500g
- 

**Quantity Available:** 2 sets



### Conductivity Tester

Measures conductivity of general water solutions. Uses 4 AAA batteries. Includes calibration solution.

- 0 - 20,000  $\mu\text{S}/\text{cm}$
- Accuracy: +/- 1% F.S
- 0 – 50°C auto temperature compensation

**Quantity Available:** 1



### Digital Lux Meter

Measures luminance, the amount of light falling on a given surface. Uses one 9V battery.

- Ranges 0 - 100,000 Lux
- Accuracy: +/- 5%
- Sampling rate: 0.4 second

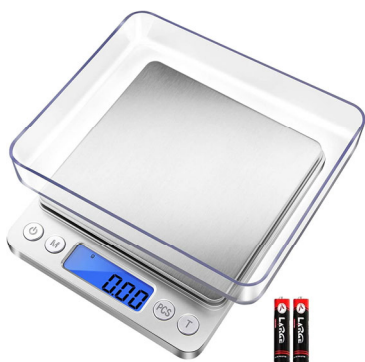
**Quantity Available:** 1



### Digital Multimeter

Auto/manual ranging digital multimeter. Measures AC/DC Voltage, AC/DC Current, Resistance, Capacitance, Frequency and Duty Cycle. Also performs Diode Test and Continuity Check. Uses 3 AAA batteries.

**Quantity Available:** 10



### Digital Pocket Scale 500x0.01g

Gram scale equipped with high precision sensor system. 500 gram max weight capacity and reads weights in increments of 0.01g, Min. weight recommendation: 0.03g. Uses 2 AAA batteries,

Quantity Available: 9



### Digital Pocket Scale 3000x0.1g

Gram scale equipped with high precision sensor system. 3000 gram max weight capacity and reads weights in increments of 0.1g, Min. weight recommendation: 0.3g. Uses 2 AAA batteries,

Quantity Available: 1



### Digital Thermometer

- 8 inch stainless steel probe
- Temp range: -50°C/-58°F to 150°C/302°F

Quantity Available: 2



### Field Compass Set

Fast, simple and accurate, these baseplate compasses are quick to learn and ideal for navigating with a map and compass. Balanced for northern hemisphere; accuracy = 2.5°

Includes:

- 30 handheld compasses w/ lanyard
- 1 large instructor compass

Quantity Available: 1 set



### Infrared Pocket Thermometer

- Temp range: -33°C/-27°F to 110°C/230°F
- Easy to use, rapid readings

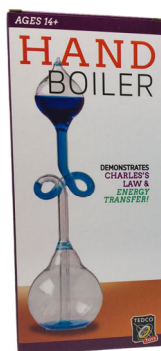
Quantity Available: 8



### Garmin eTrex 20 Handheld GPS

High-sensitivity, WAAS-enabled GPS receiver quickly acquires satellite locations. Features a 2.2" 65K color display with 176x22-pixel resolution. Pre-loaded worldwide basemap supports Garmin custom maps and BirdsEye™ satellite imagery. Add optional mapping software via the micro-SD card slot. Connect to your computer with the USB interface. Powered by 2 AA batteries for up to 20 hours.

**Quantity Available:** 10



### Hand Boiler

Classic science toy that is sure to please and educate. As you wrap your hand around the base of the hand boiler the blue liquid will appear to boil within the glass vessel. The hand boiler demonstrates Charles's law and energy transfer perfectly.

**Quantity Available:** 4



### Lab Scale/Electronic Balance

High precision balance with maximum weight of 3000g and an accuracy of 0.01g. Equipped with an upgraded high-sensitivity build-in sensor, adjustable feet, overload alarm, error indication, external calibration and unit conversion function.

**Quantity Available:** 2



### Magnetic Stirrer Hot Plate Mixer

- 1000 mL stirring capacity
- Max 270°C/520°F
- 100-2000 RPM
- Heats and stirs at same time
- Adjustable thermometer holder

**Quantity Available:** 3



### Mini Blacklight

Six inch portable, lightweight fluorescent blacklight. Applications for use include forensic experiments, oil/leak detection, gem and mineral inspection, forgery detection and much more. Uses 4 AA batteries. Also doubles as a flashlight.

Watts: 4

Wavelength: 365 nm

**Quantity Available:** 10

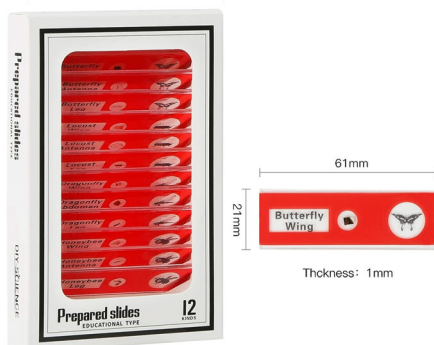


### pH Meter

Compact, easy to use meter with these features:

- Used in laboratory and industrial application
- Manual one-point calibration
- Single-line LED screen for easy viewing

**Quantity Available:** 10



### Prepared Slide Set

48 microscope slides of plant, insect and animal tissues for basic biology education.

**Quantity Available:** 1 set



### Stereo Microscope with USB Digital Camera

- 10X, 20X, 30X, 60X magnification
- Top or bottom lighting
- High resolution and broad field of view
- Clear stereo images
- 45 degree inclined binocular viewer
- USB Camera for PC display

**Quantity Available:** 6



### Switchable UV Lamp 254/365

Small, lightweight lamp. Applications for use include forensic experiments, oil/leak detection, gem and mineral inspection, and sterilization. Uses 4 AA batteries.

Watts: 4

Wavelength: 254/365 nm

Intensity: 113/68  $\mu\text{W}/\text{cm}^2$

**Quantity Available:** 10



### Thermostatic Water Bath

Features heated water chamber to incubate samples at a constant temperature.

- Selectable openings
- 3L capacity
- Temp range: room temp +10 - 100°C w/increment of 0.1°C

**Quantity Available:** 1



**50 mL beaker**

**Quantity Available:** 2 dozen plastic, 1 dozen glass



**100 mL beaker (glass)**

**Quantity Available:** 9 dozen



**250 mL beaker (glass)**

**Quantity Available:** 10 dozen



**1000 mL beaker (glass)**

**Quantity Available:** 3



**125 mL Erlenmeyer Flask w/lid (plastic)**

**Quantity Available:** 1 dozen



**250 mL Erlenmeyer Flask w/lid (glass)**

**Quantity Available:** 2 dozen





**250 mL beaker w/ handle** (*plastic*)

**Quantity Available:** 1 dozen



**100 mL graduated cylinder** (*plastic*)

**Quantity Available:** 1 dozen



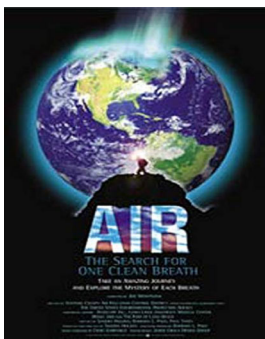
**250 mL graduated cylinder** (*plastic*)

**Quantity Available:** 6



**40 mm funnel** (*plastic*)

**Quantity Available:** 2 dozen



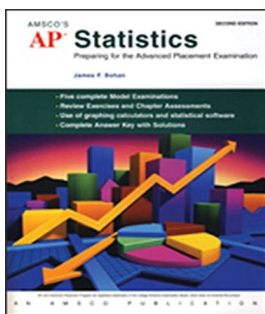
**Title:** *Air, the Search for One Clean Breath; Educators' Guide Grades 6-12*

**Publisher/Year:** Ventura County Air Pollution Control District, 2010

**Description:** The Guide accompanies the film of the same name and contains nine original lessons *NOTE: All the lessons can be taught independently. However, to maximize the educational benefits for students, we recommend viewing the film if possible.*

**Copies Available:** 1

**ISBN:**



**Title:** *AP Statistics: Preparing for the Advanced Placement Exam (2nd ed.)*

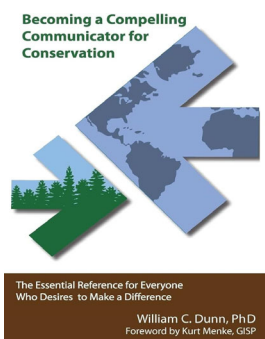
**Author:** James F. Bohan

**Publisher/Year:** Perfection Learning, 2006

**Description:** This complete review of the topics covered by the College Board's AP Statistics curriculum is designed to help students develop the skills and strategies needed to succeed on the Advanced Placement Statistics examination.

**Copies Available:** 1

**ISBN:** 9781567655810



**Title:** *Becoming a Compelling Communicator for Conservation*

**Author:** William C. Dunn

**Publisher/Year:** CreateSpace, 2014

**Description:** This book is about transforming knowledge to action. Successfully doing so requires good communication skills, a proficiency especially important in conservation. Lessons include how to: • lay the organizational foundation for papers and presentations • write direct and clear scientific papers • create thought-provoking oral presentations • gain the attention of decision makers • effectively lead public meetings.

**Copies Available:** 1

**ISBN:** 9781494885830



**Title:** *Build it Strong! (First Science)*

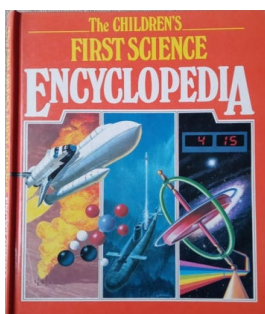
**Author:** Julian Rowe, Molly Perham

**Publisher/Year:** Children's Press, 1994

**Description:** An introduction to building such as bricklaying, animal constructions, foundations, roofs, strong shapes, pylons, bridges, tents, materials testing, and more. Grades 1-2

**Copies Available:** 1

**ISBN:** 9780516081380



**Title:** *Children's First Science Encyclopedia*

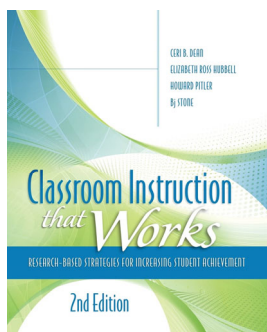
**Author:** John Paton

**Publisher/Year:** Exeter Books, 1985

**Description:** A survey of the fields of science and technology includes discussions of the galaxy, gravity, computers, photography, engines, atoms, and heat, electricity, engineering and more. Grades K-1

**Copies Available:** 1

**ISBN:** 9780671077457

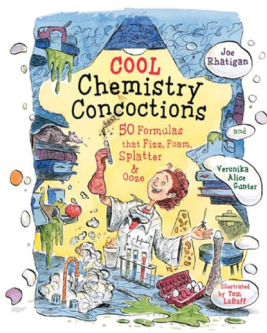


**Title:** Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement (2nd ed.)

**Author:** Ceri B. Dean, et al. **Publisher/Year:** ASCD, 2012

**Description:** This all-new, completely revised second edition of the classic text pulls from years of research, practice, and results to reanalyze and reevaluate the nine instructional strategies that have the most positive effects on teaching and learning.

**Copies Available:** 1 **ISBN:** 9781416613626

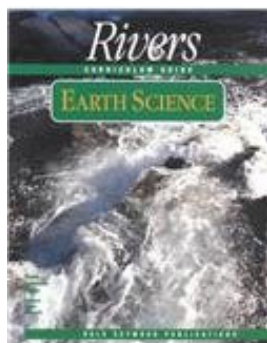


**Title:** Cool Chemistry Concoctions: 50 Formulas that Fizz, Foam, Splatter & Ooze

**Author:** Joe Rhatigan, Veronika Alice Gunter **Publisher/Year:** Lark Books, 2005

**Description:** Explained in terms that children will both understand and appreciate. All the activities appear on colorful illustrated spreads with an engaging cast of kid characters who show how the science fun is done. Most of the experiments use ordinary household materials, and they provide some delightful visual and tactile effects. Grades 3-6

**Copies Available:** 1 **ISBN:** 9781579906207

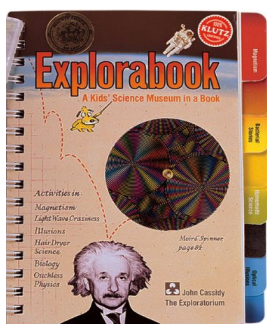


**Title:** Earth Science (Rivers Curriculum Guide)

**Author:** William Donato, et al. **Publisher/Year:** Dale Seymour Publications, 1998

**Description:** The Rivers Curriculum units form a complete, interdisciplinary program or stand alone as supplements to your existing curriculum. Each comprehensive teacher resource includes a variety of field and classroom activities, teacher support materials, journal, portfolio, and other assessment components, and blackline masters. Evaluating the physical features of a river system and exploring clues to historical development within a local area. Grades 9-12

**Copies Available:** 1 **ISBN:** 9780201493702

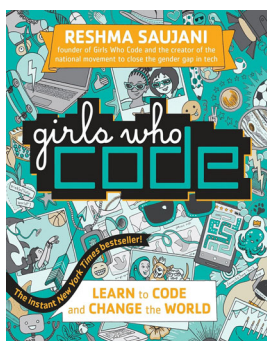


**Title:** Explorabook: A Kids' Science Museum in a Book

**Author:** John Cassidy **Publisher/Year:** Klutz Press, 1991

**Description:** A hands-on science museum squeezed between the covers of a book. Tons of experiments are featured and nearly all of them can be done right on the spot using the magnifying lens, magnet, agar and other bound-in apparatus. Grades 3-4

**Copies Available:** 1 **ISBN:** 9781878257147



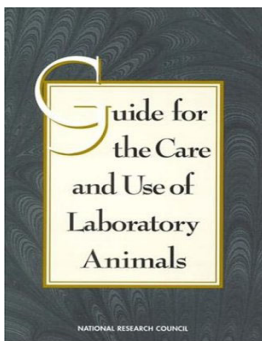
**Title:** Girls Who Code: Learn to Code and Change the World

**Author:** Reshma Saujani **Publisher/Year:** Viking Books, 2017

**Description:** Founder of the organization Girls Who Code, Reshma Saujani, wants to inspire you to be a girl who codes! Bursting with dynamic artwork, down-to-earth explanations of coding principles, and real-life stories of girls and women working at places like Pixar and NASA, this graphically animated book shows what a huge role computer science plays in our lives and how much fun it can be. Grades 5-6

**Copies Available:** 1 **ISBN:** 9780425287538





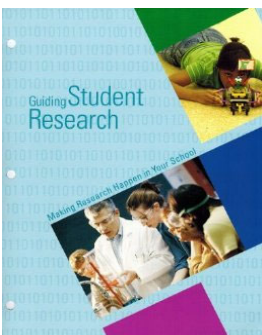
**Title:** **Guide for the Care and Use of Laboratory Animals**

**Author:** National Research Council    **Publisher/Year:** National Academies Press, 1996

**Description:** The purpose of the *Guide* is to assist institutions in caring for and using animals in ways judged to be scientifically, technically, and humanely appropriate. The *Guide* is also intended to assist investigators in fulfilling their obligation to plan and conduct animal experiments in accord with the highest scientific, humane, and ethical principles.

**Copies Available:** 1

**ISBN:** 9780309053778



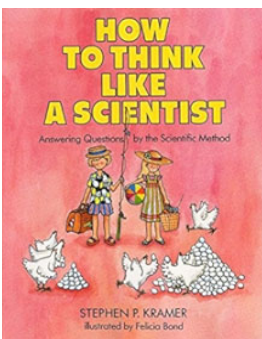
**Title:** **Guiding Student Research: Making Research Happen in Your School**

**Author:** Shapiro, Martin J. (ed.)    **Publisher/Year:** NCSSMST, 2004

**Description:** Published by the National Consortium for Specialized Secondary Schools of Mathematics and consistent with the National Science Education Standards, this "how to" guide will get you started on practical hands-on student research in high school.

**Copies Available:** 7

**ISBN:**



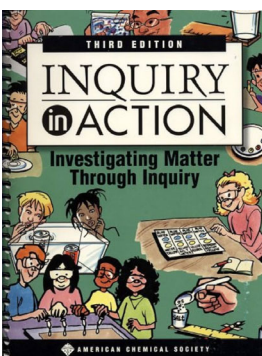
**Title:** **How to Think Like a Scientist: Answering Questions by the Scientific Method**

**Author:** Stephen P. Kramer    **Publisher/Year:** HarperCollins, 1987

**Description:** The scientific method can help you find answers to many of the questions you are curious about. Kramer's invitation to think like a scientist, illustrated by Bond's humorous and appealing pictures, will receive enthusiastic response from young readers, scientist and nonscientist alike. Grades 3-7

**Copies Available:** 1

**ISBN:** 9780690045659



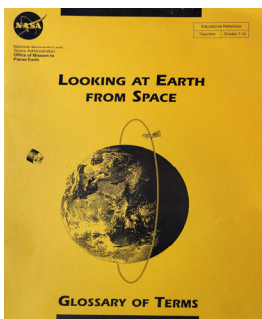
**Title:** **Inquiry in Action: Investigating Matter Through Inquiry**

**Author:** James H. Kessler, Patricia M. Galvan    **Publisher/Year:** Am. Chem Society, 2007

**Description:** What causes certain substances to dissolve in water? Why do some liquids bead up on wax paper while others spread out? These questions and many more are explored in *Inquiry in Action*, a 470-page resource of guided, inquiry-based activities that covers basic chemistry concepts along with the process of scientific investigation. Grades 3-5

**Copies Available:** 1

**ISBN:** 9780841274273



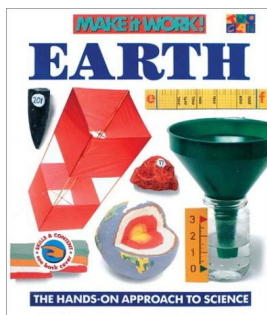
**Title:** **Looking at Earth from Space; Glossary of Terms**

**Author:**    **Publisher/Year:** NASA

**Description:** This NASA series of publications was developed to familiarize educators with global change issues and Mission to Planet Earth, and to enable teachers to enhance classroom studies with hands-on activities using satellite images.

**Copies Available:** 1

**ISBN:**



**Title:** Make it Work! Earth

**Author:** Wendy Baker, Andrew Haslam

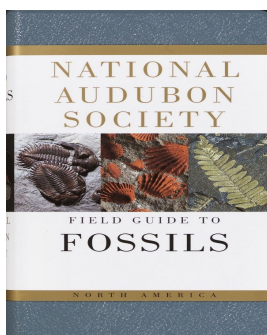
**Publisher/Year:** Action Publishing, 1992

**Description:** Experiments and activities introduce the world of earth science. Grades 3-4

**Copies Available:** 1

**ISBN:** 1882210959

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**Title:** National Audubon Society Field Guide to North American Fossils

**Author:** Ida Thompson

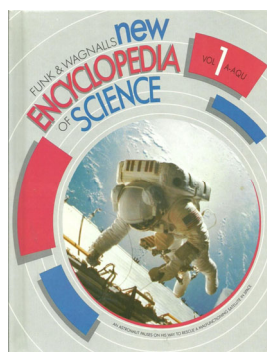
**Publisher/Year:** Alfred A Knopf, Inc., 1982

**Description:** Featuring over 500 identification photographs organized by color and shape, this Guide is the perfect companion for any fossil hunting expedition. Essential reference for identifying corals, trilobites, shells, teeth, bones, as well as fossil-bearing rocks and outcrop formations. The text includes information on size, geological period, geographical distribution, and ecology of the animal or plant before it was fossilized.

**Copies Available:** 1

**ISBN:** 9780394524122

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**Title:** New Encyclopedia of Science: Vol 1 (A-AQU)

**Author:** George Kohn (ed.)

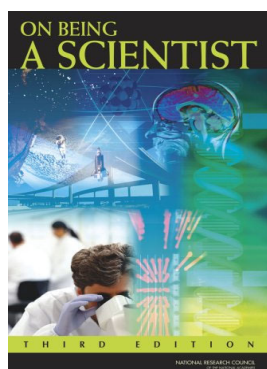
**Publisher/Year:** Raintree Publishers Inc., 1984

**Description:** Interesting and informative science facts and definitions with colorful illustrations. Grades 3-6

**Copies Available:** 1

**ISBN:**

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**Title:** On Being a Scientist: A Guide to Responsible Conduct in Research

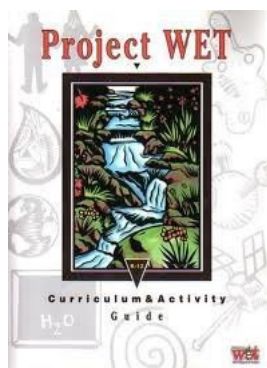
**Publisher/Year:** National Academies Press, 2009

**Description:** The book describes the ethical foundations of scientific practices and some of the personal and professional issues that researchers encounter in their work. It applies to all forms of research-whether in academic, industrial, or governmental settings-and to all scientific disciplines. Aimed primarily at graduate students and beginning researchers, but its lessons apply to all scientists at all stages of their scientific careers.

**Copies Available:** 1

**ISBN:** 9780309119702

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**Title:** Project Wet Curriculum & Activity Guide

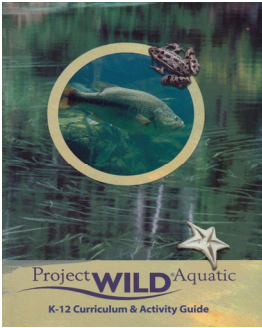
**Publisher/Year:** The Watercourse & the Council for Environmental Education, 1995

**Description:** Activities are designed to engage students of all ages – in formal and non-formal education settings – in the study of water through interactive simulations, use of models and reality-based scenarios. The book includes over 80 activities studying water science, as well as water challenges from multiple viewpoints. Grades K-12

**Copies Available:** 1

**ISBN:**





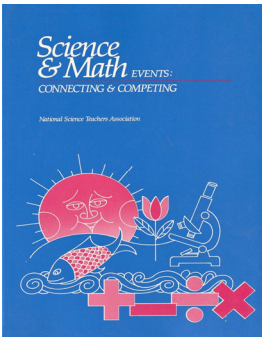
**Title:** Project Wild Aquatic, K-12 Curriculum & Activity Guide

**Publisher/Year:** Council for Environmental Education, 2004

**Description:** The goal of Project WILD is to develop awareness, knowledge, skills, and commitment resulting in informed decisions, responsible behavior, and constructive actions concerning wildlife and the environment. The Project WILD K-12 Curriculum Guide contains over 40 activities each with an outdoor component and tied to national standards.

**Copies Available:** 1

**ISBN:**



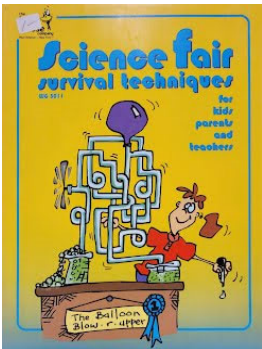
**Title:** Science and Math Events: Connecting and Competing

**Publisher/Year:** National Science Teaching Association, 1990

**Description:** Helpful guide from the NSTA to help teachers and their students get involved with STEM competitions. Includes advice from experienced teachers and results from and NSTA survey of past student participants but the bulk of the book is dedicated to providing the reader with the “nuts and bolts” of involvement in STEM competitions.

**Copies Available:** 1

**ISBN:** 9780873550901



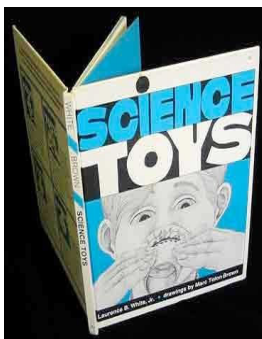
**Title:** Science Fair Survival Techniques for Kids, Parents and Teachers

**Publisher/Year:** The Wild Goose Company, 1997

**Description:** Science fair time can be as troubling and stressful as it is fun. This book provides help with choosing a project, activities to get you going and suggestions for science-like questions to ask about the activities. Activities are designed to spark further investigation and help with designing your own unique science fair project!

**Copies Available:** 1

**ISBN:** 9781571560803



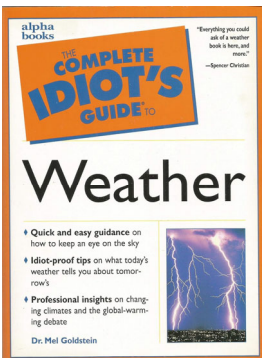
**Title:** Science Toys

**Author:** Laurence B. White      **Publisher/Year:** Addison Wesley Publishing Co, 1975

**Description:** Directions for simple science tricks, experiments, and projects that demonstrate basic scientific principles. Grades K-3

**Copies Available:** 1

**ISBN:** 9780201085983



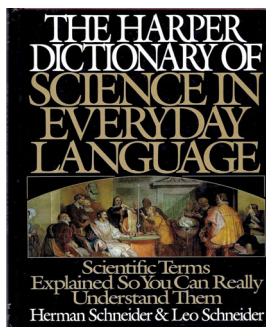
**Title:** The Complete Idiot's Guide to Weather

**Author:** Mel Goldstein      **Publisher/Year:** Alpha, 2002

**Description:** A comprehensive overview of climate, weather and weather phenomena. Covering the basics and moving into extreme weather, global climates and weather-related health, Goldstein makes the information accessible and interesting to read. New coverage for this edition will include new information on storm tracking, hobbies such as hurricane tracking, updates in weather satellites/technology, and expanded information on extreme weather.

**Copies Available:** 1

**ISBN:** 9780028643410



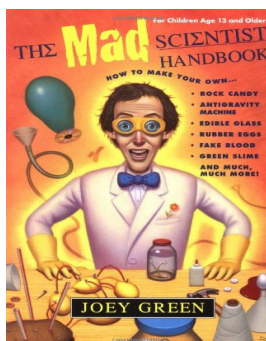
**Title:** **The Harper Dictionary of Science in Everyday Language**

**Author:** Herman Schneider, Leo Schneider    **Publisher/Year:** HarperCollins, 1988

**Description:** A book that explains scientific terms and techniques with wit and charm and, most of all, in plain English. Containing more than 1000 terms and supplemented by nearly 200 illustrations, all areas of science are covered!

**Copies Available:** 1                      **ISBN:** 9780060159504

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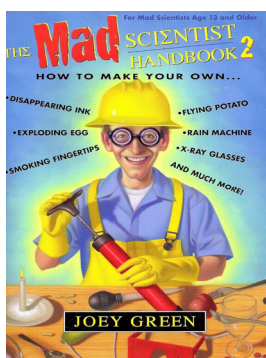
**Title:** **The Mad Scientist Handbook**

**Author:** Joey Green                      **Publisher/Year:** Perigee Trade, 2000

**Description:** Offers young readers a comprehensive science book filled with wild and wacky projects, such as making green slime, cooking edible glass, creating fake blood, and more. Grades 6-8

**Copies Available:** 1                      **ISBN:** 9780399525933

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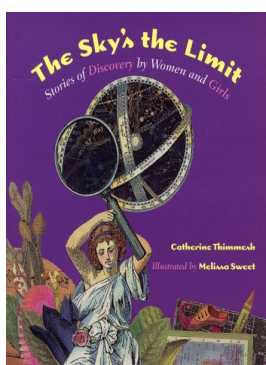
**Title:** **The Mad Scientist Handbook II**

**Author:** Joey Green                      **Publisher/Year:** Perigee Trade, 2002

**Description:** A collection of experiments includes those that can be performed using ordinary household objects, such as making a battery from money or a beach ball-powered elevator, plus explanations of why each works. Grades 6-8

**Copies Available:** 1                      **ISBN:** 9780399527753

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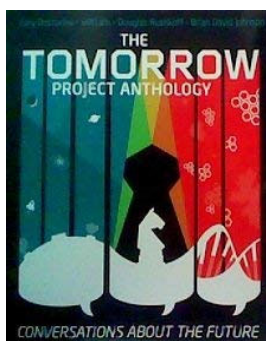
**Title:** **The Sky's the Limit: Stories of Discovery by Women and Girls**

**Author:** Catherine Thimmesh    **Publisher/Year:** Houghton Mifflin, 2002

**Description:** A tribute to the findings and revelations of these remarkable women and girls: to their perseverance, their epiphanies, their wondrous curiosity. Brought to life by stunning collage illustrations, these inspiring stories drawn from primary sources consistently probe into still unanswered questions. Here are discoveries that open our eyes not only to what women and girls can accomplish but also to the astonishing world in which we live.

**Copies Available:** 1                      **ISBN:** 9780618076987

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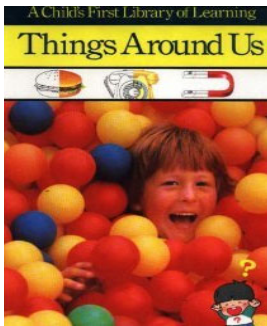


**Title:** **The Tomorrow Project Anthology: Conversations About the Future**

**Publisher/Year:** Intel Corporation, 2011

**Description:** Scientists, engineers, legends and luminaries, science fiction authors and recognized experts. Their visions, stories and passionate arguments are collected here. Join the conversation and change the future.

**Copies Available:** 1                      **ISBN:** 9781934053454



**Title:** Things Around Us (Child's First Library of Learning)

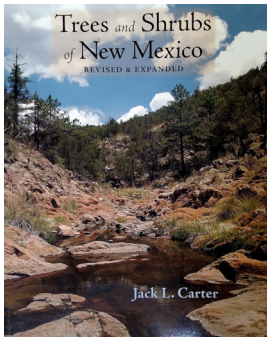
**Publisher/Year:** TimeLife, 1988

**Description:** Questions and answers presented about some of life's everyday mysteries, such as why steel rusts, why soap gets things clean, and how plants grow and more. Introduces scientific thinking and encourages inquiry by investigating things we encounter everyday. Grades 2-3

**Copies Available:** 1

**ISBN:** 9780809448456

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**Title:** Trees and Shrubs of New Mexico Revised and Expanded

**Author:** Jack L. Carter

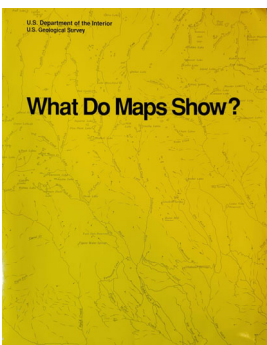
**Publisher/Year:** Mimbres Publishing, 2012

**Description:** Designed for use by both interested laypersons and plant scientists. Contains over 500 full-color photographs, 450 finely detailed illustrations, 496 species described, colorful county maps showing species' distribution, updated nomenclature and taxonomic information, and more.

**Copies Available:** 1

**ISBN:** 9780965840446

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**Title:** What Do Maps Show?

**Publisher/Year:** U.S. Department of the Interior, U.S. Geological Survey

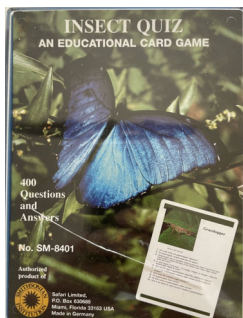
**Description:** Curriculum package that teaches and reinforces geographic and map-reading skills. Appropriate for upper elementary and middle school classes. Includes teaching poster, step-by-step lesson plans for four geography and map reading lessons, reproducible maps and activity sheets.

**Copies Available:** 1

**ISBN:**

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### Title: Insect Quiz

**Description:** Test your knowledge on 40 different insects each featured on its own card with 10 questions. A total of 400 questions will engage and entertain players of all ages.

**Quantity Available:** 1



### Title: The Game of Earth

**Description:** The toss of a die determines whether you'll be quizzed about Earth's **E**nvironment, **A**tmosphere, **R**esources, **T**ectonics or **H**ydrosphere. Four challenging levels permit players of like and/or different ages and abilities to compete. Be first to correctly answer one question in each of the five categories to spell the word "EARTH" and win! Ages 10 - adult

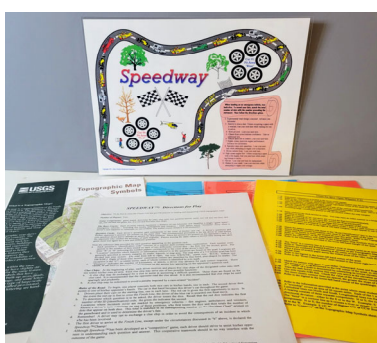
**Quantity Available:** 1



### Title: The Game of Space

**Description:** The toss of a die determines whether you'll be quizzed about **S**tars, **P**lanets, **A**stronomy, **C**onstellations or **E**xploration. Four challenging levels permit players of like and/or different ages and abilities to compete. Be first to correctly answer one question in each of the five categories to spell the word "SPACE" and win! Ages 10 - adult

**Quantity Available:** 1



### Title: Speedway: The Road Scholar Game

**Description:** Be the first to cross the finish line while improving your map-reading skills by answering questions about and interpreting USGS topographic maps. The distinctive characteristic of a topographic map is that the shape of the Earth's surface is shown by contour lines making it possible to measure the height of mountains, depths of the ocean and steepness of slopes.

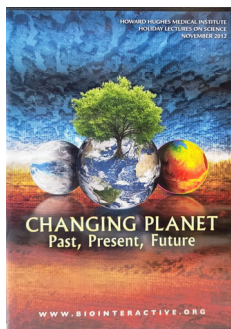
**Quantity Available:** 1



### Title: SBAR Loteria

**Description:** Produced by Sustainable Bioeconomy for Arid Regions (SBAR), a federally funded research and outreach project investigating the development of sustainable crops, bioproducts and the creation of bioeconomies in Arid regions in the southwest US. Loteria is similar to bingo but with images. In SBAR Loteria, the images showcase the themes of sustainability, agriculture and the SBAR project. Includes 26 game boards and 57 caller cards in both English and Spanish.

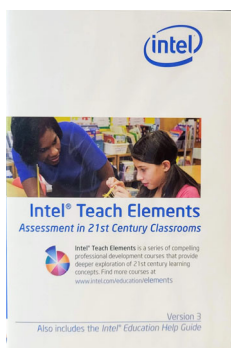
**Quantity Available:** 5



### Title: **Changing Planet: Past, Present, Future (DVD)**

**Description:** Three leading researchers guide viewers on an exciting exploration of the history of life on Earth and discuss present day concerns about climate change. Includes four full-length presentations with detailed chapter stops, direct access to videos and animations to illustrate a topic, discussion on climate change, Spanish and English subtitles.

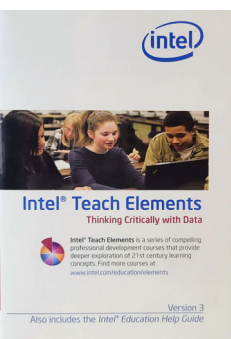
**Copies Available:** 1



### Title: **Intel Teach Elements: Assessment in 21st Century Classrooms (CD)**

**Description:** In this course, you'll get an in-depth look at assessment that meets the needs of 21st century learners. See how assessment strategies can benefit your teaching practices and students' learning. Learn how to plan, develop and manage student-centered assessment. Follow three teachers to see how they are implementing embedded and ongoing assessment methods in their classrooms. You will have opportunities to apply assessment concepts with action planning exercises.

**Copies Available:** 1



### Title: **Intel Teach Elements: Educational Leadership in the 21st Century (CD)**

**Description:** In this course, you will follow two administrators who work together to use technology effectively in support of teachers and improved student achievement. You will review examples of best practices, examine your own leadership behaviors, and develop strategies to better support teachers as you address the Essential Question: *How can educational leaders support teacher effectiveness to improve student achievement?*

**Copies Available:** 1



### Title: **Intel Teach Elements: Inquiry in the Science Classroom (CD)**

**Description:** For 3rd to 8th grade teachers, this course explains and demonstrates the inquiry process in depth with interactive activities and locally relevant classroom examples. The course builds a foundation for inquiry and provides the rationale and research basis, common misconceptions, and specific strategies for inquiry as part of any science learning, regardless of the science discipline.

**Copies Available:** 1



### Title: **Intel Teach Elements: Project-Based Approaches (CD)**

**Description:** In this course, you'll find ideas to improve understanding and application of project-based approaches. You'll see examples of projects, learn the steps to planning a project, understand how to assess projects, and develop critical skills for managing and implementing projects. By the end of the course, participants who complete an Action Plan will have designed materials and activities to implement or improve project-based approaches in their classroom.

**Copies Available:** 1

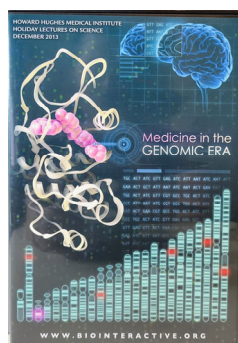




### Title: Intel Teach Elements: Thinking Critically with Data (CD)

**Description:** In this course, you will explore practical skills and strategies to draw on when teaching students to think critically about the information around them; design student projects and assessments that address critical thinking skills when collecting and analyzing data; see how technology can support students' collection, organization, and presentation of data. The course also offers practical tips for implementing projects in all subjects that ask students to think critically with data.

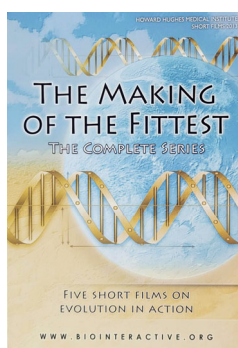
**Copies Available:** 1



### Title: Medicine in the Genomic Era (DVD)

**Description:** Two leading researchers reveal the breathtaking pace of discoveries into the genetic causes of various types of cancers and developmental brain disorders, and discuss the impact of those discoveries on our understanding of normal human development and disease. Includes four full-length presentations with detailed chapter stops, direct access to videos and animations to illustrate a topic, Spanish and English subtitles.

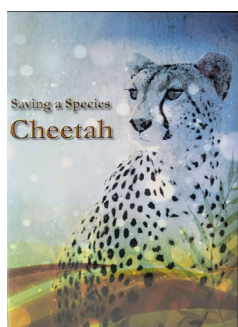
**Copies Available:** 1



### Title: The Making of the Fittest: Five Short Films on Evolution in Action (DVD)

**Description:** This series of five short films features unforgettable examples of the evolutionary process in action. Produced by award-winning filmmakers, each film is an adventure of discovery. From the postglacial lakes in southern Alaska to the highlands of East Africa, fascinating creatures and pioneering scientists reveal how the fittest are made. Titles in the series include: *Natural Selection and Adaptation*; *The Birth and Death of Genes*; *Natural Selection in Humans*; *Evolving Switches*, *Evolving Bodies*; *Got Lactase? The Co-evolution of Genes and Culture*.

**Copies Available:** 1



### Title: Saving a Species: Cheetah (DVD)

**Description:** It's a race against time to save the swift and graceful cheetah from extinction. Viewers will explore and celebrate the unique qualities of this imperiled predator. From its breathtaking speed to its beauty and vulnerability, the cheetah's story will bring your face to face with their fragile existence.

**Copies Available:** 1