

## Internet Sites for K-8 Science

from <http://www.merrybee.info> - 01/08/08

Listings for other subjects in the curriculum online at <http://www.merrybee.info/subj.html>

Listings for uses of the Internet in the classroom at <http://www.merrybee.info/book.html>

Send comment or corrections to [mberry@merrybee.info](mailto:mberry@merrybee.info)

- <http://www.ento.vt.edu/~sharov/3d/3dinsect.html>  
*3D Insects*. Topic: insects  
Students can control their examination of selected insects using virtual reality modeling (and one spider). VRML images can be rotated and magnified interactively. VRML requires CosmoPlayer (for Windows) or Worldview (for Macintosh) plug-in. Alternately, select the movie version which requires QuickTime plug-in. Links to other sites that provide information about each insect shown. Although these linked sites are written for a college student audience, many will still be helpful, especially the illustrations. grades 2-8
- <http://amazing-space.stsci.edu/>  
*Amazing Space*. Topic: space & universe  
Changing feature articles about discoveries from the Hubble Telescope, general articles and descriptive illustrations on space topics, links to online activities, current sky chart, and homework tips using the site. grades 4-8
- <http://www.150.si.edu/150trav/remember/amerinv.htm>  
*American Inventors and Inventions*. Topic: machines & inventions  
Click on one of twelve photos and find out about the invention and the inventor. Covers American inventors of 1780-1900. A Smithsonian site. grades 4-7
- <http://www.animalplanet.com>  
*Animal Planet*. Topic: animals  
News, track animal happenings around the world, slideshows, live cams, search for specific animals and information. You can watch the Animal Planet T.V. show on the Discovery Channel and then discover added information about animals online. grades 3-8
- <http://www.magickeys.com/books/zoo/index.html>  
*Animals You Can See At The Zoo*. Topic: animals  
Storybook of zoo animals by Rolando Merino. Each animal has a drawn illustration, a descriptive sentence, and the sound that the animal makes. Nine animals. grades preschool-1
- <http://www.ars.usda.gov/is/kids/>  
*Ars Sci4Kids*. Topic: environment  
Stories and features selected to connect science and everyday life. Teacher section of related activities. Produced by the Agricultural Research Service. grades 3-6.
- [http://coolcosmos.ipac.caltech.edu/cosmic\\_kids/AskKids/index.shtml](http://coolcosmos.ipac.caltech.edu/cosmic_kids/AskKids/index.shtml)  
*Ask an Astronomer for Kids*. Topic: space & universe  
Illustrated paragraphs answer questions which are grouped under 26 topics. grades 4-8.
- <http://www.miamisci.org/af/sln/>  
*Atoms Family*. Topic: energy  
Well designed introductions for activities to do off line with an explanation of the science involved. Lessons are identified by grade span with one safety lesson for K-6, several 4-8 or 5-8, and several 6-12. Covers energy conservation and transfer, light, atoms, electricity. Created by the Miami Museum of Science. grades k-8
- <http://www.cotf.edu/ete/modules/msese/earthsysflr/biomes.html>  
*Biomes*. Topic: ecosystems  
Explains what makes an ecological community. Includes a description, features, animals, plants, and climograph for six biomes: arctic, deciduous forest, desert, taiga, rainforest, savannah. This is a module within a larger site and the multiple menus can be confusing. grades 4-8.

- **<http://birds.cornell.edu/bow/>**  
*Bird of the Week.* Topic: animals  
For each featured bird there is picture, song, and descriptive text. The weekly featuring of a bird is not being maintained at this site, but you can browse for bird information by alphabetical or taxonomic order. Check the Online Bird Guide at < <http://www.birds.cornell.edu/programs/AllAboutBirds/BirdGuide/> > for more in-depth information written at a higher level. grades 4-8.
- **<http://www.brainpop.com/technology/>**  
*BrainPOP.* Topics: technology  
Animated movies with an interactive quiz and follow-up activities. Requires Flash. Limited use for free; various subscription alternatives for continued use. Many and varied topics that will appeal to grades 4-8.
- **<http://www.vims.edu/bridge/>**  
*The Bridge.* Topic: ocean  
Links to sites with online resources and current information for Marine Science education. Type "elementary" in the search box for annotated links with intended grade levels. This is the Ocean Sciences Teacher Resource Center and thus not for student use. Most links are to units and lesson plans although a few links will be to student activities. grades k-8
- **<http://www.bkfk.com/index.asp>**  
*By Kids For Kids.* Topic: machines & inventions  
BKFK has examples of inventions by both kids and famous adults, as well as providing information about the process of inventing. The concept of inventing used here is not just creating a new product, but also creating in the areas of communication arts, fine arts, and service projects. Students can submit invention ideas. Teacher resources include archived back issues of the *Inventive Thinking Newsletter* (teachers can register to receive monthly). The site can seem a bit tricky to navigate so do a little exploring. grades 2-8
- **<http://www.arborday.org/kids/carly/>**  
*Carly's Kids Corner.* Topic: plants  
Learn about trees and how kids can make a difference in our world. Includes information, activities, games and puzzles. Maintained by the National Arbor Day Foundation. Teachers should check the base site *Youth Education* with sections for grades k-3, 4-6, and educators. grades 4-6
- **<http://www.hhmi.org/coolscience>**  
*Cool Science for Curious Kids.* Topic: various science  
Activities about parts of plants, animal classification, butterflies, air junk, and tiny creatures. grades k-3
- **<http://formontana.net/cb.html>**  
*Crown Butte Virtual Field Trip.* Topic: rocks  
Guided views of rock formations explain the role played by a volcano in shaping the landscape of Montana. grades 6-8
- **<http://www.wildwildweather.com>**  
*Dan's Wild Wild Weather.* Topic: weather  
Explains weather terms and phenomena. Weather maps; teacher section. Links to online games and quizzes, at this site and some at other sites. Created by a TV meteorologist. grades 3-8
- **<http://www.dlese.org>**  
*Digital Library for Earth System Education.* Topic: teaching science  
Teaching and learning resources for all areas of Earth Science. Keyword search can be narrowed by grade level (k-2, 3-5, 6-8), type of resource, science standard, collection (e.g. Reviewed Collection). Includes articles on education issues and discussion lists. Funded by the National Science Foundation. grades k-12

- <http://members.ozemail.com.au/~macinnis/scifun/sound.htm>  
*Discovering Sound*. Topic: sound  
Thirteen experiments explore aspects of sound. Each is presented as an activity with an internal link to an explanation of the scientific concept demonstrated. grades 5-8
- <http://www.units.muohio.edu/dragonfly/>  
*Dragonfly*. Topic: various science  
20 units on various topics, each with background information, activities, experiments and links. grades 1-4
- <http://www.epa.gov/OGWDW/kids/index.html>  
*Drinking Water for Kids*. Topic: water  
Printable activity sheets and online study aids for learning about the water cycle and drinking water. Provided by the Environmental Protection Agency. Includes link to the Water Sourcebook Series listed below. grades 3-8
- <http://earth911.org/just-for-kids/>  
*Earth 911 Kids*. Topic: conservation  
Environmental conservation information, activities and links. Choose elementary or middle school although there is much overlap. Menu at left leads to other sections of the site outside the Kids area. Contest information was out-of-date when site last checked 09/07. grades 2-8
- <http://www.nationalgeographic.com/earthpulse/>  
*EarthPulse*. Topic: conservation  
Research resources related to the study of Earth and conservation with themes of ocean, climate, energy, water, technology, wild lands, wild species, habitats, population, ecosystems, and heroes. Searchable. A National Geographic site. grades 6-9
- <http://ecokids.earthday.ca/>  
*EcoKids Online*. Topic: environment  
Online games, interactive stories, offline activities, online forum, and printable word games and coloring pages. Requires Flash. grades 1-5

- <http://www.headbone.com/derby/eco/>  
*Ecology Strikes Back!*. Topic: ecosystems  
A story with 7 episodes, each ending with a puzzle that requires internet research. Covers ecology issues, conservation, food chain, energy sources, rainforest, recycling. A printable Teachers Guide includes grade level specific suggestions. Part of the Headbone site, banner ad. grades 4-8
- <http://www.na.fs.fed.us/spfo/pubs/misc/eco/index.html>  
*Ecosystem Matters*. Topic: ecosystems  
Teacher resource guide of printable activities grouped for grades K-3, 4-5, 6-8, and 9-12. Each activity guidesheet lists objectives, skills, vocabulary, and materials. There is also an ecosystem glossary. grades 1-8
- <http://www.enc.org/sitemap/>  
*Eisenhower National Clearinghouse*. Topic: teaching science  
Teacher resources for science and math; online lessons, articles about education issues, links, information about curriculum materials, the national standards, and other professional development aids.
- <http://moore.electricuniverse.com/>  
*Electric Universe*. Topic: magnets & electricity  
"Louie's Space" led by Louie the Lightning Bug for grades 1-4; "New Frontiers" for grades 5-8; "Teachers' Lounge" with lesson plans and experiments for educators. Covers the science of electricity, uses of electricity, safety, careers. Provided at sites of several utility companies. grades 1-8
- [http://dj011.k12.sd.us/elements\\_of\\_sound.htm](http://dj011.k12.sd.us/elements_of_sound.htm)  
*Elements of Sound*. Topic: sound  
Activities and projects for a unit of sound lasting about two weeks. This is a teaching unit with no online activities for the student at this site. grades 3-5
- <http://www.kidport.com/RefLib/Science/Energy/Energy.htm>  
*Energy and Matter*. Topic: energy  
Describes types of energy. grades 4-5
- <http://www.kidport.com/RefLib/Science/Energy/Energy.htm>  
*Energy Fair: Scientific Method*. Topic: experiments & scientific method  
Guides students in using an Experimental Design Model with examples, student worksheets, and class projects. Also lists the National Science Education Content Standards. A 20 page pdf booklet published in 2002. grades 2-6
- <http://www.eia.doe.gov/kids/>  
*Energy Kid's Page*. Topic: energy  
Topics cover: the science of energy, sources of energy, energy conservation, timeline and biographies. An interactive "fun & games" section includes riddles, pictures to color, puzzles, quiz. Site also provides, classroom activities (pdf files), glossary, links. grades 2-8
- [http://www.glc.k12.ga.us/BuilderV03/lptools/lpshared/lpdisplay.asp?Session\\_Stamp=&LPID=52232](http://www.glc.k12.ga.us/BuilderV03/lptools/lpshared/lpdisplay.asp?Session_Stamp=&LPID=52232)  
*Energy Meisters*. Topic: energy  
Lesson plan with printables. Students define energy, examine sources, locate coal sources on map, and discuss energy use in the home. grades 3-4
- <http://www.energyquest.ca.gov/>  
*Energy Quest*. Topic: energy  
Created by the California Energy Commission. Articles, projects, games, links, download Adobe Acrobat (PDF) booklets. Searchable. Covers energy in our lives, types of energy, and the place of scientists and inventors. Separate section for teachers. grades 2-6

- <http://www.epa.gov/kids/>  
*Environmental Explorers' Club*. Topic: environment  
Colorful site for kids to explore plants & animals, air, water, recycling. Includes sections with art and science activities. grades 1-6
- <http://www.isd77.k12.mn.us/resources/cf/SciProjIntro.html>  
*Experimental Science Projects*. Topic: experiments  
Guide to the steps for conducting an experimental science project as a classroom activity or for a science fair. Links to a more detailed version of the Guide, and to a sample project. grades 3-7
- [http://www.spacegrant.hawaii.edu/class\\_acts/index.html](http://www.spacegrant.hawaii.edu/class_acts/index.html)  
*Exploring Planets In The Classroom*. Topic: space & universe  
Hands-on Activities sheets and lesson plans. Not leveled. Segments include solar system, gravity, volcanology, Moon, Mars. Developed in 1996 at the University of Hawaii and maintained for accuracy. grades 4-9
- <http://www.nefsc.noaa.gov/faq/>  
*FishFAQ*. Topic: ocean  
Facts about all types of marine life organized by type. Browse questions and click for an answer. grades 4-8.
- [http://www.gould.edu.au/foodwebs/kids\\_web.htm](http://www.gould.edu.au/foodwebs/kids_web.htm)  
*Food Webs*. Topic: ecosystems  
Create a food web for four different habitats: Australian grasslands, African grasslands, Antarctic and marine. In another "Mystery" section, the student identifies the cause of death of pictured animals. Site accompanies the Gould League Kit "Food webs, Classification and Biodiversity", but the kit is not needed for this section. grades 4-6.
- <http://allaboutfrogs.org/frogInd.shtml>  
*Frogland! AllAboutFrogs*. Topic: animals  
Information about frogs in the wild and frogs as pets. Lots of activities and games, some requiring Java or Flash. Searchable. grades 2-7.
- <http://www.spartechsoftware.com/reeko/MoreExperimentsSortCategory.htm#Sound>  
*Good, good, good, vibrations*. Topic: sound  
Three experiments demonstrate the principles of sound waves and how we hear. grades 2-6
- <http://earthobservatory.nasa.gov/Laboratory/Biome/graphindex.html>  
*Great Graph Match*. Topic: ecosystems  
After reading descriptions of seven biomes, the student reads a pair of graphs to figure out to which city (biome) the graphs apply. Two levels: select either beginner or advanced. grades 5-8
- <http://www.urbanext.uiuc.edu/gpe/gpe.html>  
*Great Plant Escape*. Topic: plants  
Designed for students in grades 4 & 5 to help Detective LePlant find clues, do experiments and solve problems as they journey into the world of plants. Online lessons are presented as six "cases". grades 3-5
- <http://library.thinkquest.org/5847/>  
*Greatest Inventor and Inventions*. Topic: machines & inventions  
Articles, timeline, games and a quiz. An award winning ThinkQuest Junior website. grades 4-6
- <http://www.groundwater.org/kc/kc.html>  
*Groundwater Foundation: Kids Corner*. Topic: water  
Activities for students, resources for educators, and experiments to do at home. Activities focus on basic issues of groundwater, the water cycle, global water distribution, conservation and vocabulary. Intermediate students can use independently after initial instruction in navigating the site. grades 3-6



- [http://www.americanchemistry.com/s\\_plastics/hop\\_jr/index.html](http://www.americanchemistry.com/s_plastics/hop_jr/index.html)  
*Hands On Plastics Jr.* Topic: technology  
Activities cover plastics people use, safety, plastics & polymers. Correlations to science standards given for teachers. See larger site at <http://www.teachingplastics.com/> for classroom activities, background information and links K-4 or 5-8. grades 2-4
- <http://www.galaxy.net/~k12/index.shtml>  
*Hands-On Technology Program.* Topic: experiments  
Directions for experiments in the subjects: physical science (sound, electricity & magnetism, simple machines, solids/liquids/gasses, matter); life science (dinosaurs, the human body); earth science (recycling, space, weather, water); and math (abacus, geometry of structures, checkbooks). Varying grade levels are identified. grades 1-6
- <http://www.sedl.org/scimath/pasopartners/senses/lesson3.html>  
*Hearing.* Topic: sound  
Classroom activity demonstrating how sound is produced. From a unit on the five senses created by the Southwest Educational Development Laboratory. grades k-1
- <http://www.howstuffworks.com>  
*How Stuff Works.* Topic: various science  
Features and video clips about science topics related to the news and popular topics. Covers all areas of science. Categories to browse: earth science, engineering, life science, military, physical science, space, supernatural. grades 4+
- <http://www.weatherworks.com/>  
*How The Weather Works.* Topic: weather  
Activities and projects that change during the year. The WeatherWorks team answers selected questions that are submitted via email. Weather products store. Overall, the site has an upbeat tone that should be interesting to students, but with all the options on the entry page you may want to guide students to selected links. grades 6-8
- <http://www.pedagonet.com/Insectclopedia/lsp/lns.html>  
*Insectclopedia Lesson Plans.* Topic: insects  
Directory of lesson plans and units categorized by level: preschool-3, 4-6, 7-8. Title and suggested grade level are listed. Linked sites are for teachers, although some could be used by students online as assigned by the teacher. grades preschool-8.



### Insect Lesson Plans - Resources

[JK- 3](#) - [Grades 4-6](#) - [Grades 7-8](#) - [Grades 9-12](#) - [Other](#) - [More Lessons](#) - [Music Lessons](#) - [Phys Ed Les](#)

#### JK- 3

[Activities for "The Very Hungry Caterpillar"](#) K-2

[Adopt An Insect Project](#)

[Africanized Honey Bee](#)

[Bees and Ants](#) JK -1

[Bee Unit](#) Grade 1

[Birth of a Butterfly](#) 1-2

[Bug Fun](#)

[Bug Go](#) Learn to identify some insects

[Bugs](#) K - 8

[Incredible Insects](#) K-1

[Insects](#) Primary grades

[Insects and Aeronautics](#)

[Insects and Spiders](#) 3-8

[Insect Communication and Harmful Insects](#) JK - 1

[Insects Living In Groups](#) Grade 1

[Insect Matching](#) Grade 2 - 3

[Insects We Love and Hate](#) K - 2

----- Continuing -----

- **<http://www.worldalmanacforkids.com/explore/inventions.html>**  
*Inventions*. Topic: machines & inventions  
Timeline of inventions categorized by how they have changed our lives. Information on selected inventors. grades 4-8.
- **<http://www.ent.iastate.edu/imagegallery/>**  
*Iowa State University Entomology Image Gallery*. Topic: insects  
Color photographs grouped into eight categories of insects. A few QuickTime movies of insects in action. grades 2-8.
- **<http://ippex.pppl.gov/interactive/electricity/>**  
*Ippex online*. Topic: magnets & electricity  
A learning module on electricity and magnetism consisting of animated slides. Created by Princeton University Plasma Physics Laboratory. Requires Shockwave. grades 5-8
- **<http://www.kidsgowild.org>**  
*Kids Go Wild*. Topic: animals  
News, stories, facts, and puzzles about wild animals. Produced by the World Conservation Society. grades 2-8
- **<http://www.ncar.ucar.edu/eo/kids/>**  
*Kids' Crossing*. Topic: weather  
Attractive menu of links to weather sites covering clouds & atmosphere, climate & global warming, water cycle, and dangerous weather. grades 3-7
- **<http://www.kidsplanet.org/>**  
*Kids' Planet*. Topic: animals  
Puzzles, games, story, and fact sheets on different species for students; Three curriculum units for teachers: wolf, sea otter, Florida black bear. Sponsored by Defenders of Wildlife. grades 1-8
- **<http://www.mcwa.com/kids.htm>**  
*Kids' Water Fun*. Topic: water  
Hands-on activities to do offline, with interesting quick facts about the science of water and water use. grades 2-5
- **<http://www.kidsreads.com/features/010418-earth-day.asp>**  
*Kidsreads - Earth Day*. Topic: conservation  
Background and annotated booklist for Earth Day. grades k-6
- **<http://www.kineticcity.com/>**  
*Kinetic City Cyber Club*. Topic: various science  
Students join to follow a space adventure format with problems to be solved requiring a knowledge of science concepts. Requires Flash. grades 5-8
- **<http://www.si.edu/lemelson/>**  
*Lemelson Center for the Study of Invention and Innovation*. Topic: machines & inventions  
True stories about inventors, inventions, and innovations. Activities to practice innovative thinking. grades 5-8
- **<http://www.fi.edu/color/color.html>**  
*Light and Color*. Topic: light  
Unit on light and color presented by the Franklin institute. Be sure to check the links at the bottom of the page. Intermediate level students can do an offline experiment to explore the color of light at <http://www.fi.edu/tfi/activity/physics/op-3.html>. grades 4-8
- **[http://cse.ssl.berkeley.edu/light/light\\_tour.html](http://cse.ssl.berkeley.edu/light/light_tour.html)**  
*Light Tour*. Topic: light  
Tutorial introduces the electromagnetic spectrum through the concepts of wavelength and amplitude. Students see how astronomers explore images from space. Teacher tips section. grades 6-8

- **<http://home.interserv.com/~skyblade/magindex.htm>**  
*Magnet Madness.* Topic: magnets & electricity  
Uses simple illustrations to answer the question, "What is magnetism?" explaining how magnetism works in general, and specifically why a compass works. grades 1-4
- **<http://www.coolmagnetman.com/magindex.htm>**  
*Magnet Man.* Topic: magnets & electricity  
Explanation of magnetism in the classroom, home and space. Experiments you can do with magnets and electromagnets. Includes sections on safety and on how to take care of magnets. grades 4-8
- **<http://www.miamisci.org/hurricane/weatherstation.html>**  
*Make A Weather Station.* Topic: weather  
Instructions directed to the student for building weather station tools (offline) that measure air pressure, moisture, temperature and wind. Developed by the Miami Museum of Science. grades 2-6
- **<http://ology.amnh.org/marinebiology/>**  
*Marine Biology: The Living Oceans.* Topic: ocean  
Brief articles and both online and offline activities. Provided by American Museum of Natural History. grades 4-8
- **<http://www.bbc.co.uk/schools/ks2bitesize/science/materials.shtml>**  
*Materials.* Topic: matter  
Start with an interactive online activity, study the explanatory text, then take an online quiz. Topics: changing state, characteristics of materials, gases/liquids/solids, keeping warm, reversible & irreversible changes, rocks & soils, solids & liquids. Teacher link for lesson plans and worksheets to print. Part of the Bitesize site by BBC. grades 4-7
- **[http://www.chem4kids.com/files/matter\\_intro.html](http://www.chem4kids.com/files/matter_intro.html)**  
*Matter.* Topic: matter  
After an overview that explains the physical and chemical properties of matter, students can explore solids, liquids, gases, plasmas, mixtures, and solutions. A menu of examples or topics for further exploration changes to relate to the term selected. The sections on atoms and on elements build on what is learned in "Matter", and are accessible from the menu at the bottom of the screen. grades 5-8
- **<http://www.microbeworld.org/microbes/>**  
*Meet the Microbes.* Topic: various science  
Explanations of what microbes are, types of microbes, and where they live. Microbiology timeline for older students. Also relates to health, ecology, careers. grades 4-8
- **<http://www.enchantedlearning.com/subjects/butterfly/species/Monarch.shtml>**  
*Monarch Butterfly.* Topic: insects  
Explains the life cycle of the monarch; also illustrations, printable activities, and links. grades 2-5
- **<http://montereyaquarium.org/lc/>**  
*Monterey Bay Aquarium.* Topic: ocean  
This is the entry page to a variety of resources for both kids and teachers including activities and games, live web cams, and a Video Library of sea creatures. Teachers can download the Sea Searcher's Handbook for more articles and hands-on activities. grades k-8
- **[http://www.bedford.k12.ny.us/wpes/corcoranweb/virtual\\_museum/home.htm](http://www.bedford.k12.ny.us/wpes/corcoranweb/virtual_museum/home.htm)**  
*Mrs. Corcoran's Class Virtual Ocean Museum.* Topic: ocean  
This virtual museum is the class project of a first grade integrated unit of study. Created by first grade students at West Patent Elementary in Bedford Hills, N.Y. grades 1-2



- <http://www.ed.mtu.edu/esmis/id71.htm>  
*Multiple Intelligence Sound Unit*. Topic: sound  
A sixth grade teacher shares activities used in the unit on sound that he developed for his classroom. This is a teaching unit with no online activities for the student at this site. grade 6
- [http://www.nasa.gov/mission\\_pages/shuttle/main/](http://www.nasa.gov/mission_pages/shuttle/main/)  
*NASA - Space Shuttle*. Topic: space & universe  
The entry page to NASA information on current and recent missions. Video clips and photos from flights. Technical details of the shuttle. Subscribe to podcasts. grades 5 and up
- <http://www.nasaexplores.com/>  
*NASAexplores*. Topic: space & universe  
NASAexplores publishes new articles each week about current NASA projects. Articles are adapted for three different reading levels and age groups: K-4, 5--8, 9-12. Lesson plans and print-ready activities for articles which are archived. Site also has glossary, trivia, games, calendar, links. grades 1-8
- <http://www.nwf.org/kids/>  
*National Wildlife Federation for Kids*. Topic: environment  
Activities and information related to various environmental topics. Selections from current issues of NWF magazines: *Wild Animal Baby* (ages 1-4), *Your Big Backyard* (ages 3-7), and *Ranger Rick* (ages 7 and up). grades preschool-6
- <http://www2.nature.nps.gov/geology/education/>  
*Nature & Science Geology Resources*. Topic: rocks  
Teacher resources to use with students. Descriptions and links to geology and paleontology materials with National Parks examples. grades 2-8
- <http://www.kidsplanet.org/tt/elementlessons/index.html>  
*New Lessons for Elementary School Kids*. Topic: ecosystems  
Download seven lessons with fact sheets and puzzle sheets. Designed to be used as a whole class unit including activities to do at home with parent involvement. Nothing directly online. grades 1-4
- <http://www.calstatela.edu/faculty/eviau/edit557/oceans>  
*Ocean Collection for Kids*. Topic: ocean  
Information on ocean related topics presented in a variety of ways. Some online activities in the Oceanlife For Kids section. An attractive layout that's easy to move through, but confusing to try to relocate something. grades k-4
- <http://www.oceanexplorer.noaa.gov/>  
*Ocean Explorer*. Topic: ocean  
Follow ocean expeditions; picture/movie gallery; history of ocean exploration; lesson plans. grades 5-8
- <http://www.oceanslive.org/portal/index.php?module=pagesetter&func=viewpub&tid=1&pid=293>  
*Oceans for Life*. Topic: ocean  
Teachers can download lesson plans designated for grades 6-8 or 9-12. Accompanying videos that explore NOAA's national marine sanctuaries can be used within the lesson or viewed independently by students. Includes social studies tie-in through geography and maritime history. Provided by the National Oceanic & Atmospheric Administration and National Geographic Society. grades 5-8
- <http://www.oceanslive.org/portal/index.php?module=pagesetter&tid=1&filter=audience:eq:3&tpl=block-list&orderby=core.created:desc&pubcnt=4>  
*OceansLive Kids*. Topic: ocean  
Online activities and online videos collected from various producers. grades 1-6

- <http://www.msnbc.msn.com/id/14529757/site/newsweek/>  
*Of Cosmic Proportions*. Topic: space & universe  
Detailed article updating the status of Pluto. grades 4-8
- <http://www.almanac.com/weather/weather.html>  
*Old Farmer's Almanac: Long-Range Forecast*. Topic: weather  
Online regional long-range weather prediction summaries, and detailed forecasts for current month and next month. Covers United States and Canada. The editors include a general discussion of how the forecasts are made, without giving away the "secret formula." Menu under the banner links to other sections of The Old Farmer's Almanac, and a search pertains to the complete site. Sidebar advertising. grades 3 and up
- <http://www.bellmuseum.org/distancelarning/prairie/>  
*On The Prairie*. Topic: ecosystems  
All about prairie biology. Information about plants, birds, insects, mammals, reptiles, amphibians, and a glossary in A Field Guide to the Prairie. An interactive "Build-A-Prairie" activity. Includes QuickTime video clips, a prairie locator, and a section on prairie research. grades 5-8
- <http://littleshop.physics.colostate.edu/onlineexperiments.htm>  
*Online Experiments*. Topic: experiments  
These well-explained experiments demonstrating principles of physics can easily be done in the classroom. Experiments use everyday objects or just the computer system. grades 1-8
- <http://www.uen.org/utahlink/pond/herbmain.htm>  
*Online Herbarium Project*. Topic: plants  
A page of classroom resources is almost hidden at the left of the page. The project could be set up as a local activity. Students choose a dominant tree in the area, photograph the tree and press a leaf, identify the tree using a key, and submit a digitized tree photo and scan of the dried leaf. Teachers register with Utah Education Network to post student work. Open, submit at any time. grades 1-6
- <http://www.engagingscience.org/games/onlinegames/games.html>  
*Online Science Games*. Topic: various science  
Six educational games provided by Engaging Science. Games cover geology, astronomy, ecology, magnetism, and an audio acuity experiment. Text is spoken. grades 3-6
- <http://www.knockonthedoor.com/>  
*Open Door Web Site*. Topic: environment  
Created by a team of teachers for middle school students. Articles, lab exercises, quizzes, and four student written plays. Covers plants, animals, cells, climates, biomes, biodiversity, seasonal and human influences. grades 5-8
- <http://www.opticalres.com/kidoptx.html>  
*Optics for Kids*. Topic: light  
Basic information on optics, lasers, lenses, magnifying glass, and career references. Good for upper elementary. Teacher could adapt the activities and information here for lower grades. grades 4-8
- <http://www.miamisci.org/ph/>  
*pH Factor*. Topic: matter  
Introduction to acids, bases and pH. Interactive activities for students and lesson plans for teachers. grades 4-8
- <http://www.planetpals.com/index.html>  
*Photosynthesis, Energy, and Life*. Topic: plants  
The author uses a first person "folksy" style and hand-drawn illustrations in his goal to make photosynthesis interesting. Words likely to be unfamiliar are underlined to click for an explanation. grades 5-8

- <http://www.planetpals.com/index.html>  
*Planetpals Earthzone*. Topic: conservation  
Can tie-in with a study of the universe, natural resources, Earth Day. Includes games, quiz, activities, craft ideas. A busy layout with ads. A link for Mailing List connects to a forums for kids or educators. grades 1-6
- <http://plants.usda.gov/>  
*Plants Database*. Topic: plants  
Students will find the “plants in my state”, endangered plants, invasive plants, and digital images to be useful sections of this site. Teachers can download posters in addition to researching background information for classes. Searchable. grades 5-8
- <http://www.kathimitchell.com/plants.html>  
*Plants for Kids*. Topic: plants  
Two to six links for each item in an alphabetical list of plant topics: algae to lichens to wildflowers (plus a miscellaneous at the end). Most links have a format and content appropriate for 4th graders to read independently. grades 1-7
- <http://www.coaleducation.org/lessons/primary.htm>  
*Primary Lesson Plans*. Topic: rocks  
Lesson plans with printable activity sheets. Most of the site covers topics related specifically to coal, but click on Geology for more general activities about rocks. grades 2-5
- <http://www.rainbird.com/rainforest/>  
*Rain Forest Curriculum Site*. Topic: ecosystems  
Background info and download teaching modules (PDF file) by grade from K through 8. The activities and demonstrations in this teaching unit on the Earth's endangered tropical rain forests integrate science, social studies, and art. There are no online student pages. Copyright 2002. grades k-8
- <http://www.hewett.norfolk.sch.uk/curric/NewGeog/Habitats/index1.htm>  
*Rainforest Biome*. Topic: ecosystems  
Information on types, location, plant and animal life, and unique features for rainforests. grades 3-8
- [http://www.biology4kids.com/files/studies\\_scimethod.html](http://www.biology4kids.com/files/studies_scimethod.html)  
*Reasoning In Science*. Topic: experiments & scientific method  
Describes the scientific method and explains the terms hypothesis, theory, law and model. A ten question quiz provides additional information, particularly in relation to experiments. There are no actual experiments to conduct. grades 3-6


**REASONING IN SCIENCE**

Learning about the scientific method is almost like saying that you are learning how to learn. You see, the **scientific method** is the way scientists learn and study the world around them. It can be used to study anything from a leaf to a dog to the entire Universe.

The basis of the scientific method is asking questions and then trying to come up with the answers. You could ask, "Why do [dogs](#) and cats have hair?" One answer might be that it keeps them warm. BOOM! It's the scientific method in action. (OK, settle down.)

**QUESTIONS AND ANSWERS**

Just about everything starts with a question. Usually, scientists come up with questions by looking at the world around them. "Hey look! What's that?" See that



START WITH A SIMPLE QUESTION.  
WHY DO SPIDERS SPIN WEBS?

- <http://www.epa.gov/recyclecity/>  
*Recycle City*. Topic: conservation  
Activities, games, and information. Students explore how Dumptown became Recycle City.  
grades 3-5
- <http://www.recyclezone.org.uk/>  
*Recyclezone*. Topic: conservation  
Information, games and activities to get students thinking about the three Rs - reduce, reuse and recycle. A Teacher Zone, “where you can learn to teach rubbish”, has resources and links.  
Provided by Waste Watch, an environmental organization. Note: The site does have vocabulary and examples specific to the UK. grades 2-5
- <http://sln.fi.edu/fellows/fellow1/oct98/index2.html>  
*Rock Hounds*. Topic: rocks  
Rock gallery, how formed, rock collecting, activities, Online puzzles. grades 3-8
- <http://volcano.und.nodak.edu/vwdocs/vwlessons/lessons/Slideshow/Slideindex.html>  
*Rocks & Minerals Slide Show*. Topic: rocks  
Photo gallery of rocks and minerals with descriptive text. For teachers, the site has a unit on rocks and volcanoes with lessons developed by an elementary teacher. Link to Volcano World homepage (general public). See Volcano World's Kids' Page below. grades 5-8
- <http://www.chariho.k12.ri.us/curriculum/MISmart/ocean/sands.htm>  
*Sands Of The World*. Topics: rocks  
Study rocks through examining sand. Includes articles, photos, and a data recording sheet for the analysis. Students are invited to collect, document, and submit sand from where they live. Good content although large button links for awards received that are the beginning of the homepage can be confusing initially. grades 3-8
- <http://teacher.scholastic.com/researchtools/articlearchives/weather/index.htm>  
*Scholastic Research Tools - Weather*. Topics: weather  
Selected articles from archives of Scholastic student magazines. Answers to kids' questions about weather. Links to related resources. When reading online, the page shows labeled advertisement and items from the teacher store, but information can be printed or emailed by clicking the icon. grades 3-7
- <http://school.discoveryeducation.com/sciencefaircentral/>  
*Science Fair Central*. Topics: various science  
Definitions and a discussion of rules explain science fairs. A handbook, tips, and project ideas help with planning a project for a science fair. grades 3-8
- <http://www.learner.org/teacherslab/science/light/>  
*Science of Light*. Topics: light  
Helps students understand how light interacting with our senses produces our perceptions of the world. Sections: Light in Color and Laws of Light. Includes activities for the classroom.  
grades 2-8
- [http://www.scilinks.org/harcourt/hbretrieve.asp?textbookid=22&scilink=2HB05&TBImage=images/hb2.jpg&TBGrade=Grade\\_2](http://www.scilinks.org/harcourt/hbretrieve.asp?textbookid=22&scilink=2HB05&TBImage=images/hb2.jpg&TBGrade=Grade_2)  
*SciLinks: What can we find out about solids?* Topics: matter  
Annotated listing of lessons explaining solid-liquid-gas. Several have activities for students and there are a few text passages that students can read independently. grades 2-3
- <http://www.galaxy.net/~k12/sound/>  
*Science of Sound*. Topics: sound  
Series of 17 sequential experiments. Covers sound and its relation to the human body and animals, musical instruments, and communication. grades 1-3

- <http://www.seasky.org/>  
*Sea and Sky*. Topics: ocean  
A Web site dedicated to our last two great frontiers. Choose *The Sea* and join the Seasub Cousteau in exploring either coral reefs or the ocean depths. grades 5-8
- <http://www.pbs.org/oceanrealm/>  
*Secrets of the Ocean Realm*. Topics: ocean  
The Sea Dwellers section contains fact sheets about various animals of the sea. Other sections offer teacher-directed classroom activities, interactive quizzes and even a free screensaver with ocean sounds for both Windows and Mac. grades 4-8
- [http://www.sheddaquarium.org/explore\\_by\\_animal.html](http://www.sheddaquarium.org/explore_by_animal.html)  
*Shedd Aquarium*. Topic: ocean  
Online encyclopedia of marine animals. Includes photos, animal stories, and animal care. Shedd Aquarium Kid's Quest was formerly recommended for younger students, but is no longer available. grades 5-8

#### EXPLORE BY ANIMAL

[Beluga Calf Update](#)  
[Animal Stories](#)  
[Animal Care at Shedd](#)  
[Animal Care at Home](#)  
[Australian Lungfish](#)  
[Beluga Whales](#)  
[Blacktip Reef Sharks](#)  
[Bonnethead Sharks](#)  
[Cownose Rays](#)  
[Crocodile Monitor](#)  
[Dwarf Caimans](#)  
[Freshwater Rays](#)  
[Frogfish](#)  
[Giant Pacific Octopus](#)  
[Glass Lizard](#)  
[Goliath Bird-eating Tarantula](#)  
[Grand Cayman Blue Iguanas](#)  
[Green Anaconda](#)  
[Green Moray Eel](#)  
[Green Sea Turtle](#)  
[Komodo Dragon](#)  
[Leaf-tailed Gecko](#)  
[Lionfish](#)

### Explore by Animal

Come be amazed by the amazing animals that live at Shedd - all 25,951 of them!

Actually more than a million if you count all those little coral polyps!



- <http://sln.fi.edu/qa97/spotlight3/spotlight3.html>  
*Simple Machines*. Topic: machines & inventions  
Readable illustrated text defines six simple machines. A few links for those ready to know more. grades 3-5
- <http://www.edheads.org/activities/simple-machines/>  
*Simple Machines*. Topic: machines & inventions  
An excellent review of machines in everyday life. Select a room in the house, or tool shed for compound machines, and identify the purpose and type of machine in easily recognizable objects. Glossary. Teacher guide includes suggestions for using the site as a classroom activity in grades k-3. grades 4-6
- <http://www.seasky.org/sky.html>  
*Sky*. Topic: space & universe  
Join the Starship Sagan and explore the cosmos, meet space explorers, get sky news, view a gallery of pictures from space, play space-related games, or find information about products and events for the amateur astronomer. grades 5-8



- <http://www.fi.edu/fellows/fellow2/apr99/soundindex.html>  
*Sound*. Topic: sound  
Unit designed for fifth grade. Articles and experiments explain how sound is made and used. grades 4-6
- [http://www.alka-seltzer.com/as/experiment/student\\_experiment.htm](http://www.alka-seltzer.com/as/experiment/student_experiment.htm)  
*Student Science Experiments from Alka-Seltzer*. Topic: experiments & scientific method  
Eight simple experiments with a range of content levels (not given). Each experiment has the heading. "All of the experiments must be done in the presence of a parent or teacher." grades 5-7
- <http://www.teachersdomain.org/>  
*Teachers' Domain*. Topic: teaching science  
Teaching materials for life and physical sciences include multimedia resources to use in the classroom, lesson plans, and professional development resources. Select a grade level: k-2, 3-5, 6-8; then choose from commonly taught topics. Lessons are correlated to science standards. Requires free registration. Quicktime and Shockwave needed for some items. Produced by WGBH. grades k-12
- <http://www.preschooleducation.com/weather.shtml>  
*Theme Topics: Weather*. Topic: weather  
Text of weather lyrics to well-known tunes. Offline arts-and-crafts activities. Click "more" at the end of the lyric or activity shown to get the complete list. grades preschool-1
- <http://www.oceansatlas.org>  
*UN Atlas of the Oceans*. Topic: ocean  
Although designed for use by scientists and other adults, this searchable site can be used as a reference by middle school students researching specific topics. grades 6-8
- [http://interactive2.usgs.gov/learningweb/lwscripts/search\\_wizard\\_start.asp](http://interactive2.usgs.gov/learningweb/lwscripts/search_wizard_start.asp)  
*USGS Search Wizard*. Topic: teaching science  
Links to earth science information. Select either k-5 or 6-8, and a topic: earthquakes, ecosystem, floods, global change, landslide, maps, real-time information, rocks, volcanoes, water, wildlife, E-cards. Maintained by the U.S. Department of the Interior, U.S. Geological Survey. grades 2-8
- <http://volcano.und.nodak.edu/vwdocs/kids/kids.html>  
*Volcano World's Kids' Door*. Topic: rocks  
All about volcanoes: legends & original stories, pictures, online games, project ideas, and virtual field trips. Searchable. grades 4-8
- [http://www-k12.atmos.washington.edu/k12/pilot/water\\_cycle/index.html](http://www-k12.atmos.washington.edu/k12/pilot/water_cycle/index.html)  
*Water: A Never-Ending Story*. Topic: water  
Designed as a two-week study, the overview states "Students will first carry out a number of activities that demonstrate the concepts of evaporation, condensation, precipitation, and soil moisture and runoff. The students then construct a terrarium as a way to observe the water cycle as a whole. Immediately following this, students will use the Internet to acquire Real Time Data from the Olympic Peninsula which they can then use to describe how the phases of the water cycle look on the Olympic Peninsula." grades 4-5
- <http://ga.water.usgs.gov/edu/>  
*Water Science for Schools*. Topic: water  
Information on many aspects of water, pictures, glossary and activities. A U.S. Geological Survey website. Searchable. grades 4-8
- <http://ga.water.usgs.gov/edu/>  
*Water Sourcebook Series*. Topics: environment; water  
Water management program with hands-on activities, fact sheets, pdf reference resources, glossary. Select k-2, 3-5, or 6-8. English or Spanish. Provided by the Environmental Protection Agency.

- **<http://www.usbr.gov/mp/watershare/resources/lessonplans/aw-elementary.html>**  
*Water Those Plants.* Topic: water  
Lesson plans for a mini-unit developing the concept of irrigation. Using role playing activities and labs, students should acquire the vocabulary and apply critical thinking skills to draw conclusions about various aspects of irrigation. grades 2-4
- **<http://www.edheads.org/activities/weather/index.htm>**  
*Weather Activities.* Topic: weather  
Report and predict the weather in this online project (with Teacher's Guide). Also a glossary, Fahrenheit/Celsius converter, and additional lesson plans. grades 4-8
- **<http://www.epa.gov/OGWDW/kids/wsb/index.html>**  
*Weather Dude.* Topic: weather  
Weather basics, answers to weather questions, and weather songs (with promos for the CD/Book Sing Along with the Weather Dude). Links for forecasts, facts, and quizzes for students. Links for teacher resources grades 2-12. Maintained by Nick Walker, a Weather Channel meteorologist. grades 3-5
- **<http://www.wunderground.com>**  
*Weather Underground.* Topic: weather  
All types of weather-related maps. Many articles. Photo gallery of user submitted images, archived and searchable by a wide choice of criteria, and free for personal use. Some advertising. grades 4-8
- **[http://www.ucar.edu/educ\\_outreach/webweather/](http://www.ucar.edu/educ_outreach/webweather/)**  
*Web Weather For Kids.* Topic: weather  
Interactive articles explain what makes the weather in the Weather Ingredients section. Stories are from the point of view of a child experiencing the weather event. Other sections cover weather safety, games, and weather activities to do offline. grades 3-6
- **<http://www.earthlife.net/insects/six.html>**  
*Welcome to the Wonderful World of Insects.* Topic: insects  
Interesting facts, classification, glossary. Detailed articles and a lot of information, but navigation can be confusing. Search covers the Earthlife site, not limited to insects. grades 5-8
- **<http://wildwnc.org/>**  
*Western North Carolina Nature Center.* Topic: conservation  
Although targeted for North Carolina, site provides information valuable for classrooms in any area. Covers animals, trees, endangered species including endangered breeds of farm animals and poultry. Searchable and downloads. Teachers are given permission to reproduce articles. grades 4-8
- **[http://student.biology.arizona.edu/sciconn/Scientist\\_lesson.html](http://student.biology.arizona.edu/sciconn/Scientist_lesson.html)**  
*What is a Scientist?.* Topic: various (Scientific Method)  
Grade 1 students practice the characteristics of a scientist. This lesson plan includes activities and booklist. Students specifically learn about a biologist, chemist, geologist, and physicist.
- **<http://www.nyu.edu/pages/mathmol/textbook/statesofmatter.html>**  
*What Is Matter.* Topic: matter  
Text explanations and examples discuss properties and states of matter. grade: 4
- **<http://www.oplin.lib.oh.us/tree/index.html>**  
*What Tree Is It?.* Topic: plants  
Use leaf and fruit to identify common trees (based on Ohio location). Also alphabetical listing by either common or scientific name. grades 4-8

- **<http://worldwildlife.org/wildfinder/>**  
*WildFinder*. Topic: ecosystems  
 Map-based site for exploring animals species in a region. Start with a place and get a list of birds, mammals, reptiles and amphibians found in that ecoregion with links to images. Or, start with either the common or scientific name of an animal and get a list of ecoregions where it is found with links to a description of each. grades 4-8
- **<http://www.windows.ucar.edu/>**  
*Windows To The Universe*. Topic: space & universe  
 Information on Earth, the solar system, the universe, myths associated with space, space missions, famous people, and more. Select the level for a topic: intermediate, middle school, high school. Set up an online journal to record notes, links, or pictures. Sections for news and games. Teacher resources; online store. Searchable. English or Spanish. grades 4-12
- **<http://www.nps.gov/yell/kidstuff/YoungerKids/index.htm>**  
*Yellowstone National Park's Page For Younger Kids*. Topic: animals  
 Features animals of the Yellowstone Park region. Online animal alphabet book with or without narration. Animal pictures to color online or print for a coloring book. grades 1-4
- **<http://yucky.discovery.com/noflash/roaches/>**  
*Yucky Roach World*. Topic: insects  
 Interesting facts, anatomy, glossary, quiz. Note that the enticing items on the sidebar menu link to other sections of *The Yuckiest Site*, and the bottom entry Roach World is where you are. grades 4-7
- **<http://www.zoobooks.com/>**  
*Zoobooks*. Topic: animals  
 The online version of Zoobook Magazine has information and games about animals. There is a virtual zoo, animal directory, activities, games, 20 questions section, and a resource section for teachers with online thematic units. grades k-8
- **<http://pbskids.org/zoom/activities/sci/>**  
*ZOOMsci*. Topic: experiments  
 Experiments categorized under chemistry, engineering, the five senses, forces, life science, patterns, sound, structures, water. Some are more activity than experiment, but all feature the recording of results. Link to teacher section that includes training on learning to lead science activities.

Send comment or corrections to [mberry@merrybee.info](mailto:mberry@merrybee.info)