

ITN

THE INNOVATIVE TEACHING NEWSLETTER



*"If the only tool you have is a hammer.....
everything around you looks like a nail."*

Biology Resources

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Happy April, whether it brings Spring to you in the northern hemisphere or Fall in the southern hemisphere - the change of seasons is welcome! In the spirit of spring cleaning, I have given my multiple intelligences pages a face lift. The splash page can be found at <http://surfaquarium.com/MI/> I was looking to give the pages a more polished, professional look, as opposed to the child-centered design I had used in the past. Let me know what you think!

This month's newsletter is a special double-issue that touts the best biology resources on the Web. Biology is taught from the earliest grades through advanced placement high school courses. With Internet access in the classroom, the study of the life sciences become even more exciting and meaningful as students perform virtual dissections, look at small worlds close up, and experiment creating entirely new forms of life online. This month's newsletter offers a host of great online biology resources. Of course, you can view more top resources visiting Innovative Teaching at <http://surfaquarium.com/IT/CONTENT/biology.htm> Thanks to Jerry Blumengarten for his recommendations!

Access Excellence - <http://www.accessexcellence.com/>

Access Excellence is a national educational program that provides high school biology teachers access to their colleagues, scientists, and critical sources of new scientific information via the World Wide Web.

Animal Dissections Online -

Visit these links to see different examples of virtual dissections:

Clam

http://biog-101-104.bio.cornell.edu/BioG101_104/tutorials/animals/clam.html

Cow's Eye

http://www.exploratorium.edu/learning_studio/cow_eye/

Crayfish

http://biog-101-104.bio.cornell.edu/BioG101_104/tutorials/animals/crayfish.html

Earthworm

http://biog-101-104.bio.cornell.edu/BioG101_104/tutorials/animals/earthworm.html

Frog

http://www.froguts.com/flash_content/index.html

Frog

<http://curry.edschool.virginia.edu/go/frog/>

Human Brain

<http://www.vh.org/adult/provider/anatomy/BrainAnatomy/BrainAnatomy.html>

Owl Pellets

<http://www.kidwings.com/owlpellets/index.htm>

Pig

<http://www.whitman.edu/biology/vpd/>

Sheep Brain

<http://www.exploratorium.edu/memory/braindissection/index.html>

Squid

http://biog-101-104.bio.cornell.edu/BioG101_104/tutorials/animals/squid.html

Animal Diversity Web -

<http://animaldiversity.ummz.umich.edu/site/index.html>

ADW is an online database of natural history, animal distribution, classification, and conservation from the University of Michigan. Browse animals by phylum or use the search tool for targeted access to geographical range, habitat, physical description, reproduction, behavior, and more.

B-eye - <http://cvs.anu.edu.au/andy/beye/beyehome.html>

Through this long-standing site, your students can see the world through the eyes of a honey bee by either downloading pre-processed images, hovering at close range in front of a pattern, or setting the parameters to view a picture of their choice. Great stuff!

Biology in Motion - <http://www.biologyinmotion.com/>

Dr. Leif Saul presents these simulations and activities designed to promote understanding of living things using his own graphics and multimedia to provide an original look at the life sciences. He even offers the opportunity to contact him personally to help you find biology-oriented materials to use in instruction!

BioZone - <http://www.biozone.co.nz/links.html>

BioZone is hosted by a New Zealand publishing house that offers high quality teaching materials to teachers and students. Resources are updated annually and include a comprehensive collection of hotlists of resources from animal behavior to space biology with subcategories and a search function for ease of use.

Cells Alive - <http://www.cellsalive.com/>

Quill Graphics presents this impressive collection of animated images of bacterial and viral infections, parasites, and other small celled living things with detailed information. Covers plant and animal cells, cell reproduction, cell cycles and even a crystals gallery.

Cool Science for Curious Kids - <http://www.hhmi.org/coolscience/>

The Howard Hughes Medical Institute hosts this site for elementary-aged children who are studying biology. It includes studies of plants and animals, metamorphosis, and microbiology. Simple activities that are completed online and off.

Designer Genes - http://www.thinkquest.org/library/site_sum.html?tname=18258&url=18258/

This ThinkQuest entry from 1998 was composed by three secondary students interested in presenting the principles of genetics to fellow students around the world. There is a discussion of bioengineering, interactive quizzes, ethics discussions and surveys and support materials and resources.

DNA Interactive - <http://www.dnai.org/index.htm>

This Flash-based site offers a fully interactive examination of higher-level principles including the mapping of the human genome. Be sure to check out myDNAi - an online teaching community that allows you to use personalized web pages, and a Lesson Builder tool, as well as the opportunity to share ideas and resources with other teachers online. Registration is free.

EcoKids - <http://www.ecokidsonline.com/pub/>

EcoKids offers topical information about the environment through interactive, educational games and activities. It is Earth Day Canada's environmental education program online, and offers great choices for elementary students through Play & Learn, Storybooks, an art Gallery, an environmental forum and much more!

eNature - <http://www.enature.com/>

eNature is an online collection of field guides to all kinds of plants and animals as they are found in nature. Acquired by the National Wildlife Federation in 2001, there are fabulous images, extensive scientific data, an ask an expert service, backyard wildlife habitat sites, local and regional guides, and much, much more.

I Can Do That! - <http://www.eurekascience.com/ICanDoThat/index.htm>

These Fun pages cover cell theory and the genetic materials that make reproduction of living things possible. Part of the Eureka Science site, I Can Do That! offers not only a general study of cells, but DNA, RNA, synthesis, cloning and genetic engineering in simplified terms. Great for middle school and up.

Katerpillars (& Mystery Bugs) - <http://www.uky.edu/Agriculture/Entomology/ythfacts/entyouth.htm>

The University of Kentucky entomology department hosts this kid-friendly collection of resources on the study of insects, including Bugfood, Insects All Year, and Mystery Bug. The Wee Beasties Entomology Newsletter for Teachers and the Critter Casefiles, the Night Insect Walk 2004 and the lessons and units are all first rate resources.

Living Families - <http://www.fi.edu/tfi/units/life/classify/classify.html>

The Franklin Institute presents this awesome site on the classification of plants and animals, including Biological Classifications, the Tree of Life, Animal Kingdom Taxonomy, the Diversity of Life, Animal Bytes and Vascular Vegetables. Correlation to the National Science Education Standards help to make this site invaluable to teachers.

MendelWeb - <http://www.mendelweb.org/>

Look what Gregor Mendel started! This comprehensive resource by Roger Blumberg covers genetics, introductory data analysis, elementary plant science, and the history and literature of science. It's an excellent online companion to your work in the high school classroom.

Nanoworld - http://www.uq.edu.au/nanoworld/images_1.html

The University of Queensland, Australia hosts this veteran web site that includes some 700 images in a sortable gallery, a tutorial on scale and magnification, and CyberSTEM (Scanning and Transmission Electron Microscopy) live online available by appointment.

NatureServe - <http://www.natureserve.org/>

NatureServe is a Database of 50,000 species and ecosystems. It is an international network of biological inventories - known as natural heritage programs or conservation data centers - operating in all 50 U.S. states, Canada, Latin America and the Caribbean. It is a great source for discussions of threatened ecosystems and endangered species.

Strange Science - <http://www.strangescience.net/>

Subtitled "The Rocky Road to Modern Paleontology and Biology," this site tracks the growth of the life sciences from their inception. The site includes a timeline, biographies and a goof gallery that helps students appreciate that hypotheses are not always proven true in the process of scientific investigation. A nice tie-in between science and the humanities!

Switcheroo Zoo - <http://www.switcheroozoo.com/>

Studying animals by their physical features? Switcheroo Zoo allows your students the opportunity to take those features, mix them up, and create entirely new species based on the results. Be sure to see the Switcheroozeum and the Hall of Names as two great ways to appreciate the new creations of other students!

Yuckiest Site on the Internet - <http://yucky.kids.discovery.com/>

Discovery School has bought up this great online resource and added it to its collection of commercial resources. It remains a great way for elementary teachers to hook students into discovering and enjoying the life sciences. There's Yucky Fun and Games, Roach and Worm World, Ask Wendell and the ever popular Gross and Cool Body feature. Check out the teacher center while you're there!

Find More Great Resources at <http://surfaquarium.com/IT/>

Next Month's Topic: Elections 2004

You can email URL's of high quality sites which may be of interest to our readers as well as new topic ideas and input and feedback to walter@surfaquarium.com

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