

Resources for Active Teaching

Compiled by the Network of Conservation Educators and Practitioners (NCEP)

ACTION RESEARCH

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CASE STUDIES

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- HORIZON Solutions Site. Offers case studies of global biodiversity solutions and a forum for discussion. Available at <http://www.solutions-site.org/>.
- National Center for Case Study Teaching in Science. This site promotes the development and dissemination of materials and educational practices for case teaching in the sciences. It offers access to a library of case materials, which are located at <http://ublib.buffalo.edu/libraries/projects/cases/case.html>.
- Network of Conservation Educators and Practitioners, Center for Biodiversity and Conservation, American Museum of Natural History. A collection of resources for teachers including background documents, presentations, case studies, and inquiry-based exercises on a number of topics in biodiversity conservation. Available at <http://ncep.amnh.org>.
- Sigma Xi. A collection of links relevant to international researchers and educators as well as those interested in international research and education. A lot of relevant information on biodiversity, ecology, and general biology. Includes case studies. Available at <http://www.sigmaxi.org/programs/international/resource.shtml>
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CLASSROOM ASSESSMENT

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- Applying Classroom Assessment Techniques. Available at <http://www.bcit.ca/files/idc/pdf/htclassassess.pdf>.
- Center for Conservation Biology (CCB), Stanford University. The CCB is a center for research on valuing the ecosystem services of biodiversity. Available at <http://www.stanford.edu/group/CCB/>.
- Center for Teaching Excellence: Teaching Tips. Available at <http://www.celt.iastate.edu/teaching/tips.html>, <http://www.umt.edu/cte/tips/>.
- Conservation International. In addition to offering information about the activities of Conservation International, it also acts to serve as a nonprofit promoting biodiversity conservation in threatened ecosystems worldwide. This site provides information about biodiversity-related publications and acts as an Internet library. Available at <http://www.conservation.org/xp/CIWEB/home>.
- Conserve Online. An online, public library, created and maintained by The Nature Conservancy in partnership with other conservation organizations. This site is intended to foster learning and collaboration, and provide information and support to anyone making conservation-related decisions, from the staff of conservation

organizations to land managers at government agencies to local land trusts to private landowners. Available at <http://www.conserveonline.org/>.

Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES). This website provides information on the convention, including its full text, and its current activities. Available at <http://www.cites.org/>.

Critical Thinking Consortium. A clearinghouse website devoted to critical thinking. Available at <http://www.criticalthinking.org/>.

Critical Thinking Site. Available at <http://www.asa3.org/ASA/education/think/critical.htm>.

Encouraging Class Discussion. Advice on promoting classroom discussion, provided by Berkeley. Available at <http://teaching.berkeley.edu/compendium/sectionlists/sect10.html>.

Faculty Institutes for Reforming Science Teaching through Field Stations (First II). FIRST II is a national dissemination network that provides long-term professional development for life science faculty in teaching and learning. This site includes examples of inquiry-based education, case studies, innovative tools for assessment and evaluation, and inquiry-based exercises. Available at <http://www.first2.org/>.

Georgia Critical Thinking Program. Available at <http://www.glc.k12.ga.us/pandp/critthink/homepg.htm>.

Getting students to think and work in the classroom. Definition and discussion of active learning, with classroom strategies that promote it such as cooperative learning and role-playing. Also notes some of the barriers to active learning. Available at <http://www.ntlf.com/html/lib/faq/ac-stanford.htm>.

"Hands on! Notes on Active Pedagogy". This site contains resources on active learning and assessment. Available at <http://www.colorado.edu/geography/virtdept/library/activeped/activeped/html>.

HORIZON Solutions Site. Offers case studies of global biodiversity solutions and a forum for discussion. Available at <http://www.solutions-site.org/>.

Integrating Critical Thinking Skills into the Classroom. Available at <http://www.accessexcellence.org/LC/TL/buchanan/>.

Intergovernmental Panel On Climate Change (IPCC). The IPCC was established to assess scientific, technical and socio- economic information relevant for the understanding of climate change, its potential impacts and options for adaptation and mitigation. This site gives access to a number of well-respected reports, including less technical 2001 Synthesis report. Available at <http://www.ipcc.ch/>.

IUCN, The World Conservation Union. Featuring information on upcoming IUCN meetings, activities, and ongoing programs, as well as additional information concerning the state of biodiversity, endangered species, and environmental justice worldwide. Available at <http://www.iucn.org/>.

Just-in-Time Teaching (JiTT). Just-in-Time Teaching is a teaching and learning strategy based on the interaction between web-based study assignments and an active learner classroom." National Science Digital Library Project. Available at <http://www.jitt.org>, <http://www.jittdl.org>

Marine Conservation Biology Institute. Site provides marine conservation biology resources. Available at <http://www.mcbi.org/>.

National Center for Case Study Teaching in Science. This site promotes the development and dissemination of materials and educational practices for case teaching in the sciences. It offers access to a library of case materials. Available at <http://ublib.buffalo.edu/libraries/projects/cases/case.html>.

National Center for Teaching Thinking. Available at <http://www.nctt.net/ncttfaculty.html>.

National Marine Fisheries Service Office of Protected Resources, NOAA. Information and links on marine biodiversity issues. Available at <http://www.nmfs.noaa.gov/pr/>.

NatureServe: A Network Connecting Science with Conservation. A source of information about endangered species and threatened ecosystems of the Western Hemisphere provided by the non-profit organization NatureServe. Available at <http://www.natureserve.org/>.

Network of Conservation Educators and Fraction, Center for Biodiversity and Conservation, American Museum of Natural History. Collection of resources for teachers including background documents, presentations, case studies and inquiry-based exercises on a number of topics in biodiversity conservation. Available at <http://ncep.amnh.org/>.

NTLF Classroom Assessment Techniques. Available at <http://www.ntlf.com/html/lib/bib/assess.htm>.

Population Reference Bureau. A collection of web resources concerning the links between human population and the environment. Available at <http://www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=7109>.

Problem-Solving in Conservation Biology and Wildlife Management Exercises for Class, Field, and Laboratory. Link to table of contents and ordering information of book. It also contains inquiry-based exercises for use in classroom and field settings that illustrate key concepts in conservation biology. Available at <http://research.amnh.org/biodiversity/center/solving.htm>.

Project Kaleidoscope (PKAL). PKAL is an informal national alliance of individuals, institutions, and organizations committed to strengthening undergraduate science, mathematics, engineering, and technology education. Available at <http://www.pkal.org/>.

Science.gov. This site contains information resources selected by the respective US Federal agencies as their best science information. Two major types of information are included-selected authoritative science Web sites and databases of technical reports, journal articles, conference proceedings, and other published materials. Significant biodiversity-related content. Available at <http://www.science.gov/>.

Sigma Xi. A collection of links relevant to international researchers and educators as well as those interested in international research and education, lots relevant to biodiversity, ecology and general biology. Includes case studies. Available at <http://www.sigmaxi.org/programs/international/resource.shtml>
<http://www.sigmaxi.org/resources/links/undergrad.shtml>
<http://www.sigmaxi.org/resources/links/society.shtml>.

SimForest. The SimForest project aims at developing simulation-based software to support inquiry learning. Available at <http://ddc.hampshire.edu/simforest/>.

Society for Conservation Biology (SCB). A collection of lecture notes on conservation-related topics from various professors and institutions. Also, conservation literacy standards developed by SCB: a SCB education site that brings together resources for teaching K-12 through graduate and continuing education. A field manual with some template exercises.

Teaching Issues and Experiments in Ecology. TIEE is an NSF-funded, ESA-sponsored, peer-reviewed, and classroom/field tested collection of teaching materials (1) to facilitate inquiry-based experiments to teach ecology in laboratory courses, and (2) that uses active-learning methods and current controversial issues to teach ecology for lecture classes. Available at <http://tiee.ecoed.net/>.

The Convention on Biological Diversity. Signed in 1992 by over 1150 government leaders, the Convention on Biological Diversity is dedicated to encouraging sustainable development and is now a centerpiece of international efforts to conserve the world's biodiversity. Its website provides information on the convention and its current activities. Available at <http://www.biodiv.org/default.shtml>.

- The Educators Reference Desk. Available at <http://www.eduref.org/cgi-bin/res.cgi/Evaluation>.
- The Endangered Species Program, US Fish and Wildlife Service. A wonderful resource on endangered species from the U.S. Fish and Wildlife Service that provides, in addition to an overview of their program, the Endangered Species Bulletin, records of endangered flora and fauna by state and biological classification, the complete text of the 1973 Endangered Species Act and stories of its successes. Available at <http://www.fws.gov/Endangered/>.
- The Secret Life of Stuff. Information on a book that traces the origin of everyday things; teacher's guide also available. See <http://www.sightline.org/publications/books/stuff>.
- The Thinking Classroom. Available at <http://learnweb.harvard.edu/alps/thinking/ways.cfm>.
- UNEP World Conservation Monitoring Centre. Part of the UN Environment Programme (UNEP), this site offers policy information and promotes conservation action, focusing on species, protected areas, forests, marine and freshwaters, as well as ecosystems affected by climate change. Furthermore, it addresses wider aspects of biodiversity assessment, such as the relationship between trade and the environment. Available at <http://www.unep-wcmc.org/>.
- Union of Concerned Scientists: Citizens and Scientists for Environmental Solutions. Focusing on forests, global warming, and invasive species, this site promotes scientific solutions to problems of environment change worldwide. Available at <http://www.ucsusa.org/>.
- University of Virginia Teaching Resource Center. Teaching Tips: How to move beyond the 'cookbook' method and encourage 'discovery learning". Several tips for helping students learn through inquiry, from the University of Virginia's Newsletter of the Teaching Resource Center for Faculty and Teaching Assistants. Available at http://trc.virginia.edu/Publications/Teaching_Concerns/Spring_1994/TC_Spring_1994_Teaching_Tips.htm.
- Using Data in the Classroom. SERC geological site discusses how to engage students with data, why this may improve learning, and how to use technology in the classroom. A website for educators and resource developers. Available at <http://serc.carleton.edu/usingdata/index.html>.
- What is active learning? This site provides research-based resources designed to help faculty to use active learning in college and university classrooms. Available at <http://www.active-learning-site.com/>.
- World Resources Institute. Features reports, publications, news and activities of the WRI, an independent environmental research and policy organization. Available at <http://www.wri.org/>.
- WorldWatch. "Independent research for an environmentally sustainable and socially just society." This site is a leading source of information for key environmental, social, and economic trends, featuring a research library, access to publications, and special online features. Available at <http://www.worldwatch.org/>.
- Writing at the University of Toronto Site. Available at <http://www.utoronto.ca/writing/critrdg.html>

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