

Environmental Education Resources on the Internet

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While the number of educational resources related to environmental issues available via the Internet increases daily, the supply of time teachers have to seek out these resources does not! In order to make some of these sites more readily accessible to teachers, I have collected a number of them here, along with brief annotations. Of course, this compilation is not exhaustive, but merely representative.

I invite you to make corrections, offer suggestions, and submit url's for sites you would like to add to the list. Our cooperative efforts will be assembled and published on the Internet before the end of this conference.

The resources are organized under four broad categories:

1. Weblibliographies—sites where collections of links relating to environmental issues have been arranged by topic; in some cases, the links are annotated as well.
2. Organization and Agencies—groups of all types that deal with environmental issues, including government agencies as well as organizations with varying views on the environment and our stewardship of it.
3. Content-Rich Material—sites at which factual information, data and statistics, and/or opinions on various aspects of the environment can be found.
4. Teaching Resources—links to lesson plans, tutorials, activities, and interactive explorations designed to be used on- and/or off-line.

Webliographies

1. EE-Link: Environmental Education on the Internet

<http://nceet.snre.umich.edu/>

A project of the North American Association for Environmental Education (NAAEE).

FEATURES

- An annotated list of materials, activities and programs for K-12 classrooms organized by topic.
- Links to K-12 and college-level student-oriented workshops, camps, competitions, and community projects, with annotations.
- “New on EE-Link” (a list of links added in the past month).
- Sites of organizations and projects primarily concerned with environmental education.
- Links to comprehensive information about environmental issues.
- Professional development and grant opportunities.
- Site map and search capability.
- Also available in Spanish.

2. Environmental Education Resources

<http://www.ericse.org/eeindex.html>

From the ERIC Clearinghouse for Science, Mathematics, and Environmental Education.

FEATURES

- Digests: brief overviews of numerous environmental topics.
- Links to environmental organizations.

- Bookstore: orders can be placed by telephone, fax, email, or snail mail.
- Environmental education announcements.
- 15 weblinks (no annotations) to other environmental education sites.

3. Links2Go: Environment

<http://www.links2go.com/topic/Environment>

FEATURES

- 50 annotated links to environmental sites.
- Links to 38 sub-topic lists such as environmental education, energy, ground water, global warming, ozone, recycling, and wetlands.

4. Virtual Resources Field Trip for Teachers

<http://www.field-trips.org/tours/sci/resource-t/ tourelaunch1.htm>

Included within the Field Trips Site, which offers online science tours, several on environmental topics. This teacher tour visits "some of the most popular and trustworthy Web sites for nature and environmental information."

FEATURES

- An introduction to the online field trip concept.
- Tour of 11 environmental sites.
- List of 11 additional sites for exploring on your own.

5. EnviroLink Network

<http://envirolink.netforchange.com/index.html>

"The online environmental community." Requires registration (free) to log on.

FEATURES

- Latest environmental news headlines.
- Annotated resources searchable by topic, keyword, and location.
- 339 education resources.
- 1905 organizations.
- 186 government resources.
- 122 actions you can take.
- 1000's of additional links organized under 36 topics.

Organizations and Agencies

6. United States Environmental Protection Agency

<http://www.epa.gov/>

Mission is "to protect human health and to safeguard the natural environment . . . upon which life depends." Information on the topics of air, cleanup, compliance and enforcement, economics, ecosystems, emergencies, environmental management, human health, industry, international cooperation, pesticides, pollutants/toxics, pollution prevention, research, treatment and control, wastes, and water. Searchable for local information on the environment, including an interactive "enviro-mapper".

7. United States Geological Survey

<http://www.usgs.gov/>

Mission includes managing water, biological, energy, and mineral resources, and enhancing and protecting quality of life. Information on biology, geology, water. Interactive mapping of socioeconomic and environmental features for any area of the United States. The "Learning Web" for K-12 offers information and activities for biology, geology, hydrology, and geography.

8. Environmental Literacy Council

<http://www.enviroliteracy.org/>

Brings together scientists, educators, and other experts to support environmental education. Articles with embedded links to additional information covering air, biodiversity, climate, economics, energy, food, forests, population, risk, waste, and water. Includes teacher exchange for labs and activities, and textbook and materials reviews.

9. World Wildlife Fund

<http://www.panda.org/>

World's largest conservation organization (over 4.7 million supporters). Purpose is "to reverse the destruction of the Earth's natural environment and build a future in which humans live in harmony with nature." Downloadable publications in the areas of climate, forest, species, sustainability, water, and the global conservation programme. Newsroom and multimedia resources. Some articles also available in French and Spanish. \$50(US) to become a supporting member.

10. Union of Concerned Scientists

<http://www.ucsusa.org/index.html>

"Citizens and Scientists for Environmental Solutions." Information and suggestions for citizen action in such areas as global warming, missile defense, sustainable agriculture, renewable energy, nuclear safety, and building green. Includes current and archived news items. Searchable site. Member benefits available for a gift of \$25(US).

11. The Nature Conservancy

<http://nature.org/>

Works to protect environmentally valuable land and water worldwide. Searchable site, including list of state chapters and the lands they protect. Section on conservation science. Free eNewsletter. Member benefits available for a gift of \$25(US).

12. Young Reporters for the Environment

<http://www.ac-grenoble.fr/yre/indexnat/indexeng.htm>

A program of the Foundation for Environmental Education in Europe. Groups of students from a network of 12 countries propose, study, and report on environmental issues. "Press Agency" page is accessible to visitors, and includes a library of environmental documentation links and reports written by Young Reporters.

13. Sierra Club

<http://www.sierraclub.org/>

Over 900,000 members in chapters in the US and Canada, involved in local issues, activism, and outings. Links to issues (energy, sprawl, wildlands, logging, clean water, global warming, human rights, population, and responsible trade) and chapters (US states and Canadian regions). Web site is free. \$25(US) introductory membership for additional benefits.

14. Environmental Defense

<http://www.environmentaldefense.org/>

Non-profit organization linking science, economics, and law to create solutions to the most urgent environmental problems. Free newsletter, "news you can use" to take action, kids page with teacher resources.

15. Greenpeace

<http://greenpeace.org/>

A community of environmental activists with organized groups in nearly 40 countries. The Greenpeace cyberactivist community includes participants from 170 countries. Some current topics of concern covered at this site are climate, toxics, nuclear issues, oceans, genetic engineering, ocean dumping, and forests. Member newsletter can be obtained for a yearly donation of \$25(US); additional benefits available for regular monthly donors.

16. Earth Island Institute

<http://earthisland.org/>

Supports a network of over 30 environmental projects worldwide through education and activism. Site includes action

alerts, access to Earth Island Journal, and suggestions for getting involved.

17. New Society Publishers

<http://www.newsociety.com/hot.html>

Devoted to publishing materials on sustainability. Includes an annotated list of 18 other “like-minded” organizations.

Content-Rich Material

18. Amazing Environmental Organization WebDirectory

<http://www.webdirectory.com/>

"Earth's biggest environment search engine."

FEATURES

- Searchable by keyword(s), AND or OR logic only.
- Arranged into 30 browsable content areas.
- Includes an environment bulletin board.
- Separate listing of newest additions to the webdirectory.

18. Environmental News Network

<http://www.enn.com/>

Environmental news from the wire services and a staff of journalists and scientists.

FEATURES

- News--current and archived, plus news releases and a streamed "Daily Newscast".
- In-depth treatments of topics organized into 12 categories.
- Special reports on topics such as Earth Day and El Niño.
- Calendar of events.
- Online forum and chat.
- Listing of 100's of companies judged to be environmentally responsible.

20. Earthtrends: The Environmental Information Portal

<http://earthtrends.wri.org/>

From the World Resources Institute. Requires user to enter institution, name, and email address (one time only) to access some of the data.

FEATURES

- Ten content areas: coastal and marine ecosystems, water resources and freshwater ecosystems, climate and atmosphere, human populations, economics and business, energy and resources, biodiversity, agriculture, forests and grasslands, environmental governance.
- Searchable databases covering 210 countries, 400 variables, and up to 100 years of data
- Data tables, country profiles, maps, and special features for each of the ten content areas.

21. Envirofacts: Data Warehouse and Applications

<http://earthtrends.wri.org/>

“A single point of access to select US EPA environmental data.”

FEATURES

- Tools to retrieve environmental information, including preformatted query forms and mapping applications.
- Direct access to the data for technical users who want to formulate their own queries.
- Areas covered include Superfund, drinking water, risk management, air releases, chemicals, hazardous waste.
- Includes site map and table of latest dates for data updates.

22. Global Change Master Directory

<http://gcmd.gsfc.nasa.gov/>

From NASA. A searchable set of database descriptions. This site would probably be most useful to students working on environmental research projects.

FEATURES

- Data sets cover climate change, agriculture, the atmosphere, biosphere, hydrosphere & oceans, geology, geography, and human dimensions of global change.
- Each data set record includes a description of parameters measured, geographic location, time range, and where the data are stored.

23. Facts for You: Environment and Energy

<http://www.factsforyou.gov/FactsForYou.nsf/Facts/Environment&Energy?OpenDocument>

A United States government site.

FEATURES

- Real-time air pollution data.
- Annual home energy bill (average) by area.
- Fuel efficiency data for 1985-2001.
- Hazardous waste site locator.
- Data on US farms, wetlands, and forests.
- Real-time ocean wave, wind, and temperature data.

24. EnergyFiles: Environmental Sciences, Safety, and Health

<http://www.osti.gov/EnergyFiles/Environmental/main.html>

A section of the US Department of Energy Virtual Library of Energy Science and Technology.

FEATURES

- Annotated list of links to collections and databases.
- Links to electronic journals, preprints, and conference proceedings.
- Funding information, organizations and agencies, reference materials, standards.
- An interactive virtual workspace (in development) providing tools and technologies.
- EnergyPortal search--a distributed search of energy-related collections.

25. RiverResource

<http://riverresource.com/>

Encourages and facilitates the study of all aspects of rivers.

FEATURES

- River-specific links, A-Z, to organizations, resources, and classroom projects.
- General information links, organized by subject.
- Bibliography of books about rivers, organized by river or geographic area
- Database of classes doing river projects, with option to add your own project

26. Guide to Environmental Issues

<http://www.epa.gov/epadocs/guide/>

From the US Environmental Protection Agency. Available in pdf, html, or paper.

FEATURES

- Table of contents.
- Text hyperlinked to an extensive glossary.
- Sections on pollution, radiation, water, pesticides, waste, health, risk, and enforcement.

27. Environmental Risk: Your Guide to Analyzing and Reducing Risk

<http://www.epa.gov/reg5oopa/risk.htm>

From the US Environmental Protection Agency.

FEATURES

- Hyperlinked table of contents.
- Definition of risk and related concepts.
- Risk assessment, management, and communication.
- Risk comparisons.
- EPA's involvement and what you can do.

28. Public NewsRoom

<http://www.publicbroadcasting.net/weku/news/features/2001/environment/>

From the website of WEKU/WEKH-FM.

- Environmental news and information organized under the topics water, earth, air, people.
- Public forum for discussing environmental issues.

Teaching Resources

29. Blue Web'n: Environmental Studies Science

<http://151.164.151.41/cgi-bin/listApps.pl?Environmental&Studies&Science>

A listing of sites offering activities, labs, and lesson plans for many environmental topics. Includes links to some collaborative projects as well.

30. Lesson Planet

<http://www.lessonplanet.com/>

Over 16,000 online lesson plans, searchable by keyword and grade level. Science category includes 51 lessons on "ecology" and 213 on "environment." Requires membership (free).

31. DiscoverySchool.com Lesson Plans Library

<http://school.discovery.com/lessonplans/index.html>

Environmental lesson plans can be found in the topical areas "Earth Science" and "Ecology." Lessons are categorized by grade level: K-5, 6-8, 9-12. Searches can also be conducted by topic area and grade.

32. GLOBE: Global Learning and Observations to Benefit the Environment

<http://www.globe.gov/>

A worldwide K-12 program. Students make measurements in the fields of atmosphere, hydrology, soils, and land cover. Data are reported to a collective database and analyzed. Provides collaboration opportunities with scientists and other GLOBE students. Site includes an extensive teacher's guide, complete experimental protocols, and learning activities.

33. Case Studies for Teaching: Ecology/Environment

<http://ublib.buffalo.edu/libraries/projects/cases/ubcase.htm#ecology>

Twelve environmental case studies dealing with topics such as endangered species, deforestation, and global warming, along with teaching notes for each.

34. EEK! (Environmental Education for Kids) Teacher Pages

<http://www.dnr.state.wi.us/org/caer/ce/eeek/teacher/index.htm>

Fourteen activities relating to nature and the environment. List of other educational resources, some with activities and collaboration opportunities. Includes articles (some are correlated with the activities), as well as quizzes, worksheets, and activities that kids can do on their own. Site is searchable.

35. Air Quality Lesson Plans and Data

http://www.tnrcc.state.tx.us/air/monops/lessons/lesson_plans.html

From the Texas Natural Resource Conservation Commission. 36 lesson plans on air quality and related topics for grades K-12. Some activities incorporate air quality data collected at various sites in Texas.

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