



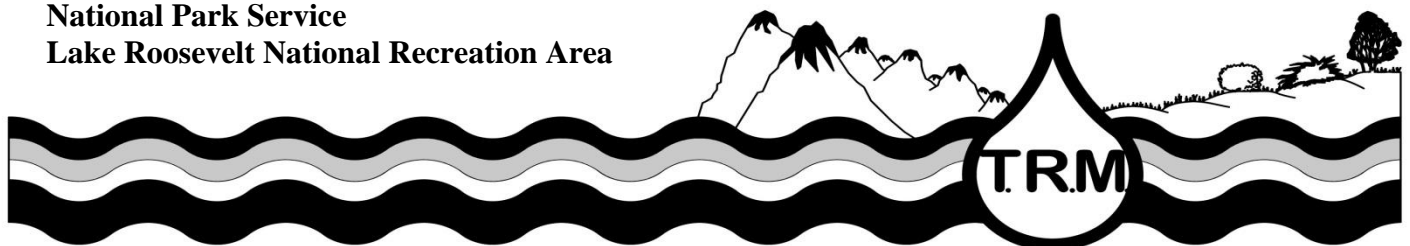
## Annotated Bibliography of Science and Environmental Education Resources, Curriculum and Websites

(Sorted alphabetically and by topic)



*"Do not try to satisfy your vanity by teaching a great many things. Awaken people's curiosity. It is enough to open minds; do not overload them. Put there just a spark. If there is some good inflammable stuff, it will catch fire."*

-- Anatole France



# Resources sorted Alphabetically

## *National Park Service Resources*

### **Arches National Park. For Teachers: Curriculum Materials. 2006.**

<http://www.nps.gov/arch/forteachers/curriculummaterials.htm>. Accessed September 14, 2009.

Science curriculum for grades 1-6. **Grade 1** – Imaginary River Trip, Plants. **Grade 2** – Rocks, Preparing for Winter, Changes in Plants and Animals. **Grade 3** – Force, Motion & Primitive Technologies, Traveling Safely in the Desert, Living and Non-living Interactions. **Grade 4** – Animal Life (Animal Adaptations), Cultural Contributions, Water Cycle. **Grade 5** – Physical Features of the Earth, Physical and Chemical Changes in Matter, Plant Adaptations. **Grade 6** – Microorganisms of the Desert, Bighorn Sheep, Heat, Light and Sound.

### **Big Bend National Park. For Teachers: Curriculum Materials. 2009.**

<http://www.nps.gov/bibe/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educators guides: Biodiversity for 2<sup>nd</sup> grade and Geology for 6<sup>th</sup> grade. Also available in Spanish.

### **Bighorn National Recreation Area. For Teachers: Curriculum Materials. 2007.**

<http://www.nps.gov/bica/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educators guides for K-8: Geology Activity, Life Science, History.

### **Black Canyon of the Gunnison National Park. For Teachers: Curriculum Materials.**

**2009.** <http://www.nps.gov/blca/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Education materials for pre-school through College. **Pre-school** - Feathers or Fur? Trees - Fall/Winter/Spring; **Kindergarten** - Ice, Snow, Water and Mist, Changing with the Seasons; **Grade 1** – Who Goes There?, The Five Senses; **Grade 2** – Fascinating Fossils; Weather, Weather All Around Us, Water: The Continuing Cycle; **Grade 3** – Dams, Globes, Maps and GPS; **Grade 4** – Die, Adapt or Move, Colorado Geology; **Grade 5** – A Watershed in Action, The Plight of the Gunnison Sage Grouse; **Grade 6** – Energy in Our World; **Grade 7** – The Magnitude of Wilderness; **Grade 9-12** – Boating and Water Safety; **Higher Education** - A "Land Ethic" For the Classroom: The Leopold Education Project, The National Park Service, Safe Boating.

**Carlsbad Caverns National Park. For Teachers: Curriculum Materials. 2007.**  
<http://www.nps.gov/cave/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Curriculum for K-8 focusing on: Caves, Canyon, Cactus and Critters; Ecology and Biology.

**Crater Lake National Park. For Teachers: Curriculum Materials. 2008.**  
<http://www.nps.gov/crla/forteachers/lessonplansandteacherguides.htm>. Accessed September 17, 2009.

Educator materials focusing on Forest and Geology curriculum.

**Everglades National Park. For Teachers: Curriculum Materials. 2008.**  
<http://www.nps.gov/ever/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educator materials and Activity Guides: Grades 4-6 - Wildlife, Plants, Environment, Water, Natural History, Native Peoples, Songs and Vocabulary; Grades 7 & 8 – Non-Native Species.

**Florissant Fossil Beds National Monument. For Teachers: Curriculum Materials. 2007.** <http://www.nps.gov/flfo/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Curriculum for Grades 1- 12 focusing on Geology, Paleontology, Science, Evolution and History.

**Glacier Bay National Park and Preserve. For Teachers: Curriculum Materials. 2009.** <http://www.nps.gov/glba/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational materials and curriculum focusing on Sea Otters, Pacific Halibut, Dungeness Crab, Kelp Forest, Marine Environment and Seabirds.

**Glacier National Park. For Teachers: Curriculum Materials. 2009.**  
<http://www.nps.gov/glac/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Glacier Teacher's Guide K-12:

*The Wilderness & Land Ethic Curriculum* - K-12 lesson plans from the Arthur Carhart National Wilderness Training Center which introduce students to the concept of wilderness.

*FireWorks Curriculum* - K-12 lessons created by the U.S. Forest Service Fire Lab in Missoula, MT which features ponderosa, lodgepole, and whitebark pine forests. It

provides students with interactive, hands-on materials to study the forces that cause change in forests, particularly wildland fire.

*Teaching with Historic Places-* Glacier's Going-to-the-Sun Road - A secondary school level lesson that is part of a series which brings the important stories of historic places into classrooms across the country.

*Ecosystem Education (COCEEC) Activities* - Secondary level lesson plans about the history of the "Crown" and perspectives on land management.

**Great Basin National Park. For Teachers: Curriculum Materials. 2006.**

<http://www.nps.gov/grba/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

*Explore the Great Basin* is a resource and activity guide for teachers. While the guide was designed with middle school students in mind, the information and activities can be adapted for any age group. Materials and activities focus on Geology, Caves, Bats, Climate: Past and Present and Ecology: The Great Basin Desert.

**Hagerman Fossil Beds National Monument. For Teachers: Curriculum Materials.**

**2009.** <http://www.nps.gov/hafo/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational materials and curriculum focusing on Climate Change. Grade 4-6.

**Lake Mead National Recreation Area. For Teachers: Curriculum Materials. 2009.**

<http://www.nps.gov/lame/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational activities and curriculum: **Grade 1** – Animal Characteristics, Cactus Characteristics; **Grade 2** – Arthropods (insects and spiders), Nocturnal Animals; **Grade 3** – Desert Weather, Desert Tortoise; **Grade 4** – Plant Identification, Archeology; **Grade 5** – Geology: Landforms in motion, Recycling and trash reduction, Animal Adaptations.

**Lassen Volcanic National Monument. For Teachers: Curriculum Materials. 2007.**

<http://www.nps.gov/lavo/forteachers/lessonplansandteacherguides.htm>. Accessed September 17, 2009.

Volcano lessons and activities for Grades 2-5.

**Mississippi National River and Recreation Area. For Teachers: Curriculum Materials. 2009.** <http://www.nps.gov/miss/forteachers/teacherresources.htm>. Accessed September 17, 2009.

Educational materials K-12: Aquatic Bugs, Birds, Beaks and Adaptation Fossils  
Water cycle: Incredible Journey River, Watersheds, Sedimentary Layers, Web of Life Game and Lessons from a Landscape.

**Montezuma Castle National Monument. For Teachers: Curriculum Materials. 2008.** <http://www.nps.gov/moca/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational materials and curriculum K-12: Geology, Biodiversity, Riparian Habitats, Wetlands, Conserving our Resources.

**Mount Rainier National Park. For Teachers: Curriculum Materials. 2008.** <http://www.nps.gov/mora/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational materials and curriculum K-12: *Where the River begins: Nisqually River Watershed*, Volcanoes of Washington State history. Grades 5-8: *Living with a volcano in your backyard*.

**National Park Service. Aliens in your neighborhood: Invasive species and the National Parks. 2003.** <http://www.nps.gov/invspcurr/aliencurriculum.htm>

National Parks Invasive Weeds curriculum are lessons that correlate to most middle school science curricula and many are easily adapted to elementary or high school grades. Lessons include Ecosystems, Plants, Spreading the Invasion, Alien Impacts, Alien Controls, Alien Issues, and Activities to Introduce the XID System and Classification.

**National Park Service. Curriculum Base Programs in your National Parks.** <http://www.nps.gov/learn/curriculum.htm>. Accessed September 9, 2009.

Your National Parks are a wealth of curriculum based experiences, aligned with local, state or national standards of learning. Links to parks with learning opportunities for you and your students, inside the classroom and in the parks.

**National Park Service. Explore Nature. Protecting our natural resources: Air, Biology, Geology, Sounds, Water.** <http://www.nature.nps.gov/>. Accessed August 24, 2009.

Within the areas of Air, Biology, Geology, Natural Sounds and Water explore topics such as: Critical Issues, Fire Management, Global Conservation, Hazards & Safety, Help Your Parks, Inventory & Monitoring, Laws & Regulations, Partnerships, Policies & Guidance,

Protecting & Restoring, Publications, Science & Research, Social Science and Sounds & Images. There are also specific areas for Students & Teachers.

**National Park Service. Interpretation and Education: Environmental Education Reading List.** <http://www.nps.gov/learn/eereadinglist.htm>. Accessed August 24, 2009.

List of books of different environmental education topics with associated activities and or websites.

**National Park Service. ParkWise: Educational resources about Alaska's national parks for teachers and students.** <http://www.nps.gov/akso/ParkWise/index.htm>. Accessed August 24, 2009.

ParkWise has been developed by the Alaska region of the National Park Service to teach school children around the country about the National Park Service and the valuable cultural and natural resources it preserves in Alaska. ParkWise is an evolving educational resource providing educational materials to teachers and homework help to students.

**Ozark National Scenic Riverways. More than skin deep: A Teacher's Guide to Caves and Groundwater. 2007.** <http://www.nps.gov/ozar/forteachers/skin-deep.htm>. Accessed September 22, 2009.

Educational materials and curriculum for K-8: Caves, Karsts, Stalactites, Cave Biology and Bats.

**Petrified Forest National Park. Curriculum Materials. Rockn' Through the Ages: From Fossils to Petroglyphs. 2008.** <http://www.nps.gov/pefo/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.

Education materials and activities, for grade 4-8, Rockin' Through the Ages: From Fossils to Petroglyphs, focusing on science and mathematical concepts with applications to language arts and social studies.

**Pictured Rock National Lakeshore. Curriculum Materials: Wildlife management activity guide. 2008.** <http://www.nps.gov/piro/forteachers/wildlifemgtguide.htm>. Accessed September 23, 2009.

Curriculum and activities for grades 9-12 focusing on wildlife and wildlife management.

**Pinnacles National Monument. Curriculum Materials. 2006.**

<http://www.nps.gov/pinn/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.

Educational materials for grades 4-8: Endangered species & reintroducing the California Condor.

**Point Reyes National Seashore. Curriculum Materials. 2009.**

<http://www.nps.gov/pore/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.

Educational materials and curriculum focusing on: Defining Habitats, Investigating Tule Elk, Identifying Resident Birds, Monitoring Creek Health, Uncovering the San Andreas Fault, Discovering Northern Elephant Seals, Observing Pacific Gray Whales. Can order a CD with all curriculum included or download each program individually.

**Rocky Mountain National Park. Curriculum Materials: Fun Facts for Teachers.**

**2007.** [http://www.nps.gov/romo/forteachers/teachers\\_fun\\_facts.htm](http://www.nps.gov/romo/forteachers/teachers_fun_facts.htm). Accessed September 23, 2009.

In the past, Rocky Mountain National Park published Tidbits via the Internet. These Tidbits have been updated and are now a part of the Fun Facts pages which are listed on this page and also on the Fun Facts page in the For Kids section. Fun Facts on many different topics including: Environment, Ecosystems, Flora, Fauna, Geology, History, Research and Seasons.

**Saguaro National Park. Curriculum Materials. 2009.**

<http://www.nps.gov/sagu/forteachers/lessonplansandteacherguides.htm>. Accessed September 23, 2009.

Educational and curriculum materials and activities focusing on desert issues.

**Saint Croix National Scenic Riverway. Curriculum Materials. 2009.**

<http://www.nps.gov/sacn/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.

Educational program called Rivers are Alive. The program takes students to the river so they can learn about the diversity and interconnectedness of life within a river and the world. Includes activities and lessons.

**Shenandoah National Park. Curriculum Materials: Stewardship Curriculum. 2008.**  
<http://www.nps.gov/shen/forteachers/stewardship.htm>. Accessed September 23, 2009.

This Environmental Stewardship interdisciplinary curriculum supplement is designed for grades K-6 by integrating character education with science, math, language arts, and social science lessons.

**Tuzigoot National Monument. Curriculum Materials: Curriculum. 2008.**  
<http://www.nps.gov/tuzi/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.

Educational materials and curriculum focusing on Geology, Biodiversity, Riparian Habitat, Wetlands and Conserving our Resources.

**Wind Cave National Park. Curriculum Materials: Hydrology Unit. 2006.**  
<http://www.nps.gov/wica/forteachers/hydrology-unit-standards-and-trunk-information.htm>. Accessed September 23, 2009.

Educational materials and activities focusing on: Watersheds, Groundwater, Cave and Karst and Pollution.

### ***Other Resources***

**Bell Museum. Distance Learning: The Watershed Game. 1998.**  
<http://www.bellmuseum.org/distancelearning/watershed/watershed2.html>. Accessed July 17, 2009.

A web based quizzing game for 3-6<sup>th</sup> graders relating to watersheds.

**Bonneville Power Administration. Resources for teachers in WA, OR, ID and MT.**  
<http://www.bpa.gov/corporate/KR/ed/page6.htm>. Accessed July 15, 2009.

Serving students in K-12 with instructional materials about: water, hydroelectricity, energy conservation, Columbia River salmon, electrical safety, resource planning and BPA history.

**Department of Fish and Wildlife. Project WILD. 2009.**  
<http://wdfw.wa.gov/outreach/education/wild.htm>. Accessed July 17, 2009.

Project WILD is an interdisciplinary conservation and environmental education program emphasizing wildlife. The program is designed for educators of kindergarten through twelfth grade. Project WILD educational materials are provided to educators through practical interactive workshops. Materials include



two activity guides for K-12th grade educators: the Project WILD K-12 Activity Guide focuses on wildlife and habitat, and the Project WILD Aquatic Education Activity Guide emphasizes aquatic wildlife and aquatic ecosystems.

**Eartheasy. Environmental Websites for Kids. 2008.**

<http://www.eartheasy.com/blog/2009/03/environmental-websites-for-kids/>

Compiled list of other environmental websites.

**EduHound. Everything for Educators. 2009. <http://www.eduhound.com/default.cfm> Accessed September 9, 2009.**

Resources and information on most topics, including science topics such as: Agriculture, Biodiversity, Energy, Global Climate, Global Warming, Recycling, Scientific Method and Water Conservation.

**Environmental Protection Agency. Drinking Water and Ground Water Kids' Stuff. 2006. <http://www.epa.gov/safewater/kids/index.html>. Accessed July 17, 2009.**

K-12 classroom lessons relating to aquifers, water sources, ground water, water cycle, tracking pollution, etc...

**Environmental Protection Agency (EPA). Teaching Resources. 2009.**

<http://www.epa.gov/teachers/teachresources.htm>. Accessed July 17, 2009.

EPA's collection of websites and documents that you can use to explain environmental topics. These resources offer basic and clear information to assist you in teaching your students about the environment. Topics include air, climate change, conservation, ecosystems, human health, waste and recycling and water.

**Exploratorium. Chaco Canyon. <http://www.exploratorium.edu/chaco/HTML/teacher.html>. Accessed September 18, 2009.**

Grade level: 3-9: Knowing North: Understanding the Relationship between Time and the Sun; Grade level: 5-8 – Modeling the Seasons.

**Forest History Society. If Trees Could Talk. 2009.**

<http://www.foresthistory.org/Education/Curriculum/>. Accessed July 17, 2009.

This 8-module, middle school environmental history curriculum allows teachers to download in pdf format, self-contained activities based upon archival materials. Each module is a compilation of primary resources--documents, maps, newspapers, oral histories or photographs--that students will be asked to examine and analyze in order to synthesize insights about human interaction with the environment.

**Japan for Sustainability. Kids Create your Future. 2008.**

<http://www.kidsforfuture.net/index.php>. Accessed July 17, 2009.

This Web site was created by Japan for Sustainability, a Japanese NGO providing information on the environment to more than 170 countries. Site is full of ideas for kids to investigate how they can improve the environment including "Ways to Create an Eco-Friendly Lifestyle," and "How to Create a City Without Automobiles," and more.

**National Christmas Tree Association. Real Trees 4 Kids: The story and science of Real Tree farming. 2008.** <http://www.realtrees4kids.org/teacher.htm>. Accessed July 17, 2009.

Grades K-2: Read about and explore trees and their parts. Get to know trees through reading, writing, math, and science. Grades 3-5: Students will learn about the life cycle of conifer trees, the types of trees grown on farms, new vocabulary, and how trees are recycled. Grades 6-8: Students will learn more about life cycles and about scientific names, join conifers for dinner at home, and hear first-hand about a year in the life of a tree grower. Grades 9-12: Students will dig deep into the soil and check out how tree growers keep their crops healthy, take a look at supply and demand, and get an inside look at conifers.

**National Geographic. Xpeditions: Lesson Plans. 2008.**

<http://www.nationalgeographic.com/xpeditions/lessons/08/g68/>. Accessed July 17, 2009.

K-12 lesson plans. The lesson plans on this site were written by educators and have been tested in the classroom. Together, they address all of the U.S. National Geography Standards, the five geography skills, and the main geographic perspectives. Topics include geography, biodiversity, bioaccumulation, mapping, physical sciences, human societies, weather, natural disasters, environmental health, etc...

**National Institute of Environmental Health Sciences (NIEHS). Environmental Science Health Education: Teachers. 2009.**

<http://www.niehs.nih.gov/health/scied/teachers/index.cfm>. Accessed July 17, 2009.

Find a variety of educational materials, many of which are standards-based, to expose your students to environmental health concepts as well as factsheets, booklets and news articles to enhance your science lessons.

**National Institute of Environmental Health Sciences (NIEHS). NIEHS Kids' Pages. 2009. <http://kids.niehs.nih.gov/home.htm>. Accessed July 17, 2009.**

Explores the impact of environment on health and encourages interest in health- and science-related careers. Games, riddles, and on-line coloring; news on environmental topics; career profiles. Also: a game in which students identify an environment-related illness for each letter of the alphabet. Also available in Spanish.

**National Oceanic and Atmospheric Administration. Estuaries.gov. <http://www.estuaries.gov> . Accessed September 9, 2009.**

The Estuaries 101 Curriculum is comprised of four two-three week modules on estuaries. Designed for 9th–12th grade classrooms – with the flexibility to adapt to higher or lower grades – it covers key National Science Education Standards for Physical Science (Transfer of Energy and Properties, Changes in Matter), Earth Science (Structure of the Earth System), and Life Science (Interdependence of Organisms, Matter, Energy, and Organization in Living Systems).

**National Resources Conservation Service. PLANTS Database. 2009. <http://plants.usda.gov/>. Accessed July 17, 2009.**

The PLANTS Database provides standardized information about the vascular plants, mosses, liverworts, hornworts, and lichens of the U.S. and its territories. Search for plants by state, wetland plants in region, endangered plants and invasive plants.

**Project Wet. Worldwide Water Education. 2009. <http://www.projectwet.org/> Accessed September 9, 2009.**

An international, interdisciplinary, water education program for formal & non-formal educators of students 5-18. Activities are designed to satisfy the goals of educational programs by complementing existing curricula rather than displacing or adding more concepts. Also provide many opportunities to address curriculum objectives & ed standards. Grade Level: K-12

**Rustle the Leaf. <http://www.rustletheleaf.com/>**

Rustle the Leaf is an online outreach that uses syndication-quality, weekly comic strips and other creative tools to communicate essential environmental themes and truths. Our goals are to encourage environmentalists, to facilitate the sharing of environmental views in an engaging, non-confrontational manner, and to introduce and reinforce environmental education with people ages 6 to 106. Teachers resources include downloadable monthly lesson plans and a student activity section.

**United Nations Foundation. The People Speak. 2009.**  
<http://www.thepeoplespeak.org/>. Accessed July 17, 2009.

United Nations Foundation project called The People Speak (TPS) encourages young people to be actively engaged on global issues and to understand the value of global cooperation. The People Speak Global Debate will begin in October 2007 with the topic of climate change and involves high school students researching the debate topic and preparing clear, persuasive arguments for both sides of the issue. Students will present their arguments and coordinate the entire student body to vote on the topic. TPS will tally national and international results, with approximately 20 countries involved, that will show where students stand on important global issues.

**United States Geological Survey (USGS). Water Science for Schools. 2009.**  
<http://water.usgs.gov/education.html>. Accessed July 15, 2009.

Information on many aspects of water, along with pictures, data, maps, and an interactive center where you can give opinions and test your water knowledge.

**United States Geological Survey (USGS). The USGS and Science Education. 2009.**  
<http://education.usgs.gov/>. Accessed July 15, 2009.

The U.S. Geological Survey provides scientific information intended to help educate the public about natural resources, natural hazards, geospatial data, and issues that affect our quality of life. Discover selected online resources, including lessons, data, maps, and more, to support teaching, learning, education (K-12), and university-level inquiry and research.

**United States Geological Survey (USGS). Real-time Water Data for the Nation. 2009.**  
<http://waterdata.usgs.gov/nwis/rt>. Accessed July 17, 2009.

Real-time water data including stream flow, lakes and reservoirs, groundwater, water quality measurements for the US.

**University of Arizona College of Agriculture and Life Sciences. Tree of Life Web Project. 2005.** <http://www.tolweb.org/tree/learn/learning.html>. Accessed July 17, 2009.

Tree of Life (ToL) learning pages for teachers and students provides information on using the Tree of Life Web Project as a tool for learning and teaching about biodiversity. The ToL Treehouses are Web pages linked to scientist created core content about the world's organisms.

**University of Washington. NatureMapping Program: Teachers Corner.**  
**<http://naturemappingfoundation.org/natmap/>. Accessed September 24, 2009.**

NatureMapping activities and data collection protocols for K-12:  
Interconnectedness, Wildlife, Habitats, Mapping, Water, Biodiversity, Monitoring  
and Data collection.

**University of Wisconsin Environmental Resources Center. Give Water a Hand: for  
young people taking action in their community. 2009.**  
**<http://www.uwex.edu/erc/gwah/>. Accessed July 17, 2009.**

National organization that offers student materials for grades K-5 and additional  
teacher resources with free downloadable guidebook in English and Spanish.

**Washington Department of Ecology. Ecology for Educators and Students:  
Classroom Curriculum K-12. 2009.**  
**<http://www.ecy.wa.gov/services/ee/curricul.html>. Accessed July 17, 2009.**

Information and resources for Washington State educators with links to  
environmental education programs such as **Washington State Project Wet - K-  
12 activity guide on water availability and water quality issues, chemical and  
physical properties, aquatic bugs as indicators of stream health, etc. Activities  
travel through the water cycle, solve the mystery of a waterborne disease,  
discover the cumulative aspects of nonpoint pollution, and much more. This  
Excellent for use from the Spokane River, groundwater or stormwater, to the  
watersheds of Puget Sound or the Columbia River.** Also links to **Healthy Water  
Healthy People; A-Way With Waste; Discover Wetlands and Estuary  
Guides.**

## Sorted by Topic

- **Ecosystems and Habitats**
- **Environmental Issues**
  - Conservation, Biodiversity, Recycling, Pollution, Energy, Envir. Health, Climate Change
- **Fauna**
- **Flora**
- **Geology, Geography and Mapping**
- **Water**

### *Ecosystems and Habitats*

**Arches National Park. For Teachers: Curriculum Materials. 2006.**

<http://www.nps.gov/arch/forteachers/curriculummaterials.htm>. Accessed September 14, 2009.

Science curriculum for grades 1-6. **Grade 1** – Imaginary River Trip, Plants. **Grade 2** – Rocks, Preparing for Winter, Changes in Plants and Animals. **Grade 3** – Force, Motion & Primitive Technologies, Traveling Safely in the Desert, Living and Non-living Interactions. **Grade 4** – Animal Life (Animal Adaptations), Cultural Contributions, Water Cycle. **Grade 5** – Physical Features of the Earth, Physical and Chemical Changes in Matter, Plant Adaptations. **Grade 6** – Microorganisms of the Desert, Bighorn Sheep, Heat, Light and Sound.

**Carlsbad Caverns National Park. For Teachers: Curriculum Materials. 2007.**

<http://www.nps.gov/cave/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Curriculum for K-8 focusing on: Caves, Canyon, Cactus and Critters; Ecology and Biology.

**Environmental Protection Agency (EPA). Teaching Resources. 2009.**

<http://www.epa.gov/teachers/teachresources.htm>. Accessed July 17, 2009.

EPA's collection of websites and documents that you can use to explain environmental topics. These resources offer basic and clear information to assist you in teaching your students about the environment. Topics include air, climate change, conservation, ecosystems, human health, waste and recycling and water.

**Glacier National Park. For Teachers: Curriculum Materials. 2009.**

<http://www.nps.gov/glac/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Glacier Teacher's Guide K-12:

*The Wilderness & Land Ethic Curriculum* - K-12 lesson plans from the Arthur Carhart National Wilderness Training Center which introduce students to the concept of wilderness.

*FireWorks Curriculum* - K-12 lessons created by the U.S. Forest Service Fire Lab in Missoula, MT which features ponderosa, lodgepole, and whitebark pine forests. It provides students with interactive, hands-on materials to study the forces that cause change in forests, particularly wildland fire.

*Teaching with Historic Places*- Glacier's Going-to-the-Sun Road - A secondary school level lesson that is part of a series which brings the important stories of historic places into classrooms across the country.

*Ecosystem Education (COCEEC) Activities* - Secondary level lesson plans about the history of the "Crown" and perspectives on land management.

**Great Basin National Park. For Teachers: Curriculum Materials. 2006.**

<http://www.nps.gov/grba/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

*Explore the Great Basin* is a resource and activity guide for teachers. While the guide was designed with middle school students in mind, the information and activities can be adapted for any age group. Materials and activities focus on Geology, Caves, Bats, Climate: Past and Present and Ecology: The Great Basin Desert.

**Lake Mead National Recreation Area. For Teachers: Curriculum Materials. 2009.**

<http://www.nps.gov/lame/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational activities and curriculum: **Grade 1** – Animal Characteristics, Cactus Characteristics; **Grade 2** – Arthropods (insects and spiders), Nocturnal Animals; **Grade 3** – Desert Weather, Desert Tortoise; **Grade 4** – Plant Identification, Archeology; **Grade 5** – Geology: Landforms in motion, Recycling and trash reduction, Animal Adaptations.

**Montezuma Castle National Monument. For Teachers: Curriculum Materials. 2008.**

<http://www.nps.gov/moca/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational materials and curriculum K-12: Geology, Biodiversity, Riparian Habitats, Wetlands, Conserving our Resources.

**Mount Rainier National Park. For Teachers: Curriculum Materials. 2008.**  
<http://www.nps.gov/mora/forteachers/curriculummaterials.htm>. Accessed  
September 17, 2009.

Educational materials and curriculum K-12: *Where the River begins: Nisqually River Watershed*, Volcanoes of Washington State history. Grades 5-8: *Living with a volcano in your backyard*.

**National Parks Service. Aliens in your neighborhood: Invasive species and the National Parks. 2003.** <http://www.nature.nps.gov/learningcenters/tools-cfm>

National Parks Invasive Weeds curriculum are lessons that correlate to most middle school science curricula and many are easily adapted to elementary or high school grades. Lessons include Ecosystems, Plants, Spreading the Invasion, Alien Impacts, Alien Controls, Alien Issues, and Activities to Introduce the XID System and Classification.

**Ozark National Scenic Riverways. More than skin deep: A Teacher's Guide to Caves and Groundwater. 2007.** <http://www.nps.gov/ozar/forteachers/skin-deep.htm>. Accessed  
September 22, 2009.

Educational materials and curriculum for K-8: Caves, Karsts, Stalactites, Cave Biology and Bats.

**Point Reyes National Seashore. Curriculum Materials. 2009.**  
<http://www.nps.gov/pore/forteachers/curriculummaterials.htm>. Accessed  
September 23, 2009.

Educational materials and curriculum focusing on: Defining Habitats, Investigating Tule Elk, Identifying Resident Birds, Monitoring Creek Health, Uncovering the San Andreas Fault, Discovering Northern Elephant Seals, Observing Pacific Gray Whales. Can order a CD with all curriculum included or download each program individually.

**Tuzigoot National Monument. Curriculum Materials: Curriculum. 2008.**  
<http://www.nps.gov/tuzi/forteachers/curriculummaterials.htm>. Accessed  
September 23, 2009.

Educational materials and curriculum focusing on Geology, Biodiversity, Riparian Habitat, Wetlands and Conserving our Resources.



**University of Washington. NatureMapping Program: Teachers Corner.**

<http://naturemappingfoundation.org/natmap/>

NatureMapping activities and data collection protocols for K-12:  
Interconnectedness, Wildlife, Habitats, Mapping, Water, Biodiversity, Monitoring  
and Data collection.

***Environmental Issues*** (Conservation, Biodiversity, Recycling, Pollution, Energy, Envir.  
Health, Climate Change)

**Big Bend National Park. For Teachers: Curriculum Materials. 2009.**

<http://www.nps.gov/bibe/forteachers/curriculummaterials.htm>. Accessed  
September 17, 2009.

Educators guides: Biodiversity for 2<sup>nd</sup> grade and Geology for 6<sup>th</sup> grade. Also  
available in Spanish.

**Black Canyon of the Gunnison National Park. For Teachers: Curriculum Materials.**

**2009.** <http://www.nps.gov/blca/forteachers/curriculummaterials.htm>.  
Accessed September 17, 2009.

Education materials for pre-school through College. **Pre-school** - Feathers or Fur?  
Trees - Fall/Winter/Spring; **Kindergarten** - Ice, Snow, Water and Mist,  
Changing with the Seasons; **Grade 1** – Who Goes There?, The Five Senses;  
**Grade 2** – Fascinating Fossils; Weather, Weather All Around Us, Water: The  
Continuing Cycle; **Grade 3** – Dams, Globes, Maps and GPS; **Grade 4** – Die,  
Adapt or Move,  
Colorado Geology; **Grade 5** – A Watershed in Action, The Plight of the  
Gunnison Sage Grouse; **Grade 6** – Energy in Our World; **Grade 7** – The  
Magnitude of Wilderness; **Grade 9-12** – Boating and Water Safety; **Higher  
Education** - A "Land Ethic" For the Classroom: The Leopold Education Project,  
The National Park Service, Safe Boating.

**Bonneville Power Administration. Resources for teachers in WA, OR, ID and MT.**

<http://www.bpa.gov/corporate/KR/ed/page6.htm>. Accessed July 15, 2009.

Serving students in K-12 with instructional materials about: water,  
hydroelectricity, energy conservation, Columbia River salmon, electrical safety,  
resource planning and BPA history.

**EduHound. Everything for Educators. 2009. <http://www.eduhound.com/default.cfm>  
Accessed September 9, 2009.**

Resources and information on most topics, including science topics such as:  
Agriculture, Biodiversity, Energy, Global Climate, Global Warming, Recycling,  
Scientific Method and Water Conservation.

**Environmental Protection Agency (EPA). Teaching Resources. 2009.**

**<http://www.epa.gov/students/teachers.html>.**

EPA's collection of websites and documents that you can use to explain environmental topics. These resources offer basic and clear information to assist you in teaching your students about the environment. Topics include air, climate change, conservation, ecosystems, human health, waste and recycling and water.

**Everglades National Park. For Teachers: Curriculum Materials. 2008.**

**<http://www.nps.gov/ever/forteachers/curriculummaterials.htm>. Accessed  
September 17, 2009.**

Educator materials and Activity Guides: Grades 4-6 - Wildlife, Plants, Environment, Water, Natural History, Native Peoples, Songs and Vocabulary; Grades 7 & 8 – Non-Native Species.

**Great Basin National Park. For Teachers: Curriculum Materials. 2006.**

**<http://www.nps.gov/grba/forteachers/curriculummaterials.htm>. Accessed  
September 17, 2009.**

*Explore the Great Basin* is a resource and activity guide for teachers. While the guide was designed with middle school students in mind, the information and activities can be adapted for any age group. Materials and activities focus on Geology, Caves, Bats, Climate: Past and Present and Ecology: The Great Basin Desert.

**Hagerman Fossil Beds National Monument. For Teachers: Curriculum Materials.**

**2009. <http://www.nps.gov/hafo/forteachers/curriculummaterials.htm>.**

**Accessed September 17, 2009.**

Educational materials and curriculum focusing on Climate Change. Grade 4-6.

**Japan for Sustainability. Kids Create your Future. 2008.**

**<http://miracle-kids.nat/>**

This Web site was created by Japan for Sustainability, a Japanese NGO providing information on the environment to more than 170 countries. Site is full of ideas for kids to investigate how they can improve the environment including "Ways to Create an Eco-Friendly Lifestyle," and "How to Create a City Without Automobiles," and more.

**Lake Mead National Recreation Area. For Teachers: Curriculum Materials. 2009.**  
<http://www.nps.gov/lame/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational activities and curriculum: **Grade 1** – Animal Characteristics, Cactus Characteristics; **Grade 2** – Arthropods (insects and spiders), Nocturnal Animals; **Grade 3** – Desert Weather, Desert Tortoise; **Grade 4** – Plant Identification, Archeology; **Grade 5** – Geology: Landforms in motion, Recycling and trash reduction, Animal Adaptations.

**National Geographic. Xpeditions: Lesson Plans. 2008.**  
<http://www.nationalgeographic.com/xpeditions/lessons/08/g68/>. Accessed July 17, 2009.

K-12 lesson plans. The lesson plans on this site were written by educators and have been tested in the classroom. Together, they address all of the U.S. National Geography Standards, the five geography skills, and the main geographic perspectives. Topics include geography, biodiversity, bioaccumulation, mapping, physical sciences, human societies, weather, natural disasters, environmental health, etc...

**National Institute of Environmental Health Sciences (NIEHS). Environmental Science Health Education: Teachers. 2009.**  
<http://www.niehs.nih.gov/health/scied/teachers/index.cfm>. Accessed July 17, 2009.

Find a variety of educational materials, many of which are standards-based, to expose your students to environmental health concepts as well as factsheets, booklets and news articles to enhance your science lessons.

**National Institute of Environmental Health Sciences (NIEHS). NIEHS Kids' Pages. 2009.** <http://kids.niehs.nih.gov/home.htm>. Accessed July 17, 2009.

Explores the impact of environment on health and encourages interest in health- and science-related careers. Games, riddles, and on-line coloring; news on environmental topics; career profiles. Also: a game in which students identify an environment-related illness for each letter of the alphabet. Also available in Spanish.

**National Parks Service. Aliens in your neighborhood: Invasive species and the National Parks. 2003. <http://www.nature.nps.gov/learningcenters/tools.cfm>**

National Parks Invasive Weeds curriculum are lessons that correlate to most middle school science curricula and many are easily adapted to elementary or high school grades. Lessons include Ecosystems, Plants, Spreading the Invasion, Alien Impacts, Alien Controls, Alien Issues, and Activities to Introduce the XID System and Classification.

**National Parks Service. Explore Nature. Protecting our natural resources: Air, Biology, Geology, Sounds, Water. <http://www.nature.nps.gov/>. Accessed August 24, 2009.**

Within the areas of Air, Biology, Geology, Natural Sounds and Water explore topics such as: Critical Issues, Fire Management, Global Conservation, Hazards & Safety, Help Your Parks, Inventory & Monitoring, Laws & Regulations, Partnerships, Policies & Guidance, Protecting & Restoring, Publications, Science & Research, Social Science and Sounds & Images. There are also specific areas for Students & Teachers.

**Rustle the Leaf. <http://www.rustletheleaf.com/>**

Rustle the Leaf is an online outreach that uses syndication-quality, weekly comic strips and other creative tools to communicate essential environmental themes and truths. Our goals are to encourage environmentalists, to facilitate the sharing of environmental views in an engaging, non-confrontational manner, and to introduce and reinforce environmental education with people ages 6 to 106. Teachers resources include downloadable monthly lesson plans and a student activity section.

**Shenandoah National Park. Curriculum Materials: Stewardship Curriculum. 2008. <http://www.nps.gov/shen/forteachers/stewardship.htm>. Accessed September 23, 2009.**

This Environmental Stewardship interdisciplinary curriculum supplement is designed for grades K-6 by integrating character education with science, math, language arts, and social science lessons.

**Tuzigoot National Monument. Curriculum Materials: Curriculum. 2008. <http://www.nps.gov/tuzi/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.**

Educational materials and curriculum focusing on Geology, Biodiversity, Riparian Habitat, Wetlands and Conserving our Resources.

**United Nations Foundation. The People Speak. 2009.**

<http://www.thepeoplespeak.org/>. Accessed July 17, 2009.

United Nations Foundation project called The People Speak (TPS) encourages young people to be actively engaged on global issues and to understand the value of global cooperation. The People Speak Global Debate will begin in October 2007 with the topic of climate change and involves high school students researching the debate topic and preparing clear, persuasive arguments for both sides of the issue. Students will present their arguments and coordinate the entire student body to vote on the topic. TPS will tally national and international results, with approximately 20 countries involved, that will show where students stand on important global issues.

**University of Washington. NatureMapping Program: Teachers Corner.**

<http://naturemappingfoundation.org/natmap/>.

NatureMapping activities and data collection protocols for K-12: Interconnectedness, Wildlife, Habitats, Mapping, Water, Biodiversity, Monitoring and Data collection.

**Washington Department of Ecology. Ecology for Educators and Students: Classroom Curriculum K-12. 2009.**

<http://www.ecy.wa.gov/services/ee/curricul.html>. Accessed July 17, 2009.

Information and resources for Washington State educators with links to environmental education programs such as **Washington State Project Wet - K-12 activity guide on water availability and water quality issues, chemical and physical properties, aquatic bugs as indicators of stream health, etc. Activities travel through the water cycle, solve the mystery of a waterborne disease, discover the cumulative aspects of nonpoint pollution, and much more. This Excellent for use from the Spokane River, groundwater or stormwater, to the watersheds of Puget Sound or the Columbia River.** Also links to *Healthy Water Healthy People; A-Way With Waste; Discover Wetlands and Estuary Guides.*

**Wind Cave National Park. Curriculum Materials: Hydrology Unit. 2006.**

<http://www.nps.gov/wica/forteachers/hydrology-unit-standards-and-trunk-information.htm>. Accessed September 23, 2009.

Educational materials and activities focusing on: Watersheds, Groundwater, Cave and Karst and Pollution.

## *Fauna*

**Arches National Park. For Teachers: Curriculum Materials. 2006.**

<http://www.nps.gov/arch/forteachers/curriculummaterials.htm>. Accessed September 14, 2009.

Science curriculum for grades 1-6. **Grade 1** – Imaginary River Trip, Plants. **Grade 2** – Rocks, Preparing for Winter, Changes in Plants and Animals. **Grade 3** – Force, Motion & Primitive Technologies, Traveling Safely in the Desert, Living and Non-living Interactions. **Grade 4** – Animal Life (Animal Adaptations), Cultural Contributions, Water Cycle. **Grade 5** – Physical Features of the Earth, Physical and Chemical Changes in Matter, Plant Adaptations. **Grade 6** – Microorganisms of the Desert, Bighorn Sheep, Heat, Light and Sound.

**Black Canyon of the Gunnison National Park. For Teachers: Curriculum Materials. 2009.** <http://www.nps.gov/blca/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Education materials for pre-school through College. **Pre-school** - Feathers or Fur? Trees - Fall/Winter/Spring; **Kindergarten** - Ice, Snow, Water and Mist, Changing with the Seasons; **Grade 1** – Who Goes There?, The Five Senses; **Grade 2** – Fascinating Fossils; Weather, Weather All Around Us, Water: The Continuing Cycle; **Grade 3** – Dams, Globes, Maps and GPS; **Grade 4** – Die, Adapt or Move, Colorado Geology; **Grade 5** – A Watershed in Action, The Plight of the Gunnison Sage Grouse; **Grade 6** – Energy in Our World; **Grade 7** – The Magnitude of Wilderness; **Grade 9-12** – Boating and Water Safety; **Higher Education** - A "Land Ethic" For the Classroom: The Leopold Education Project, The National Park Service, Safe Boating.

**Carlsbad Caverns National Park. For Teachers: Curriculum Materials. 2007.**

<http://www.nps.gov/cave/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Curriculum for K-8 focusing on: Caves, Canyon, Cactus and Critters; Ecology and Biology.

**Department of Fish and Wildlife. Project WILD. 2009.**

<http://www.projectwild.org/WashingtonCoordinator.htm>.

Accessed July 17, 2009.

Project WILD is an interdisciplinary conservation and environmental education program emphasizing wildlife. The program is designed for educators of kindergarten through twelfth grade. Project WILD educational materials are provided to educators through practical interactive workshops. Materials include two activity guides for K-12th grade educators: the Project WILD K-12 Activity Guide focuses on wildlife and habitat, and the Project WILD Aquatic Education Activity Guide emphasizes aquatic wildlife and aquatic ecosystems.

**Everglades National Park. For Teachers: Curriculum Materials. 2008.**

<http://www.nps.gov/ever/forteachers/curriculummaterials.htm>. Accessed

September 17, 2009.

Educator materials and Activity Guides: Grades 4-6 - Wildlife, Plants, Environment, Water, Natural History, Native Peoples, Songs and Vocabulary; Grades 7 & 8 – Non-Native Species.

**Florissant Fossil Beds National Monument. For Teachers: Curriculum Materials.**

**2007.** <http://www.nps.gov/flfo/forteachers/curriculummaterials.htm>.

Accessed September 17, 2009.

Curriculum for Grades 1- 12 focusing on Geology, Paleontology, Science, Evolution and History.

**Glacier Bay National Park and Preserve. For Teachers: Curriculum Materials.**

**2009.** <http://www.nps.gov/glba/forteachers/curriculummaterials.htm>.

Accessed September 17, 2009.

Educational materials and curriculum focusing on Sea Otters, Pacific Halibut, Dungeness Crab, Kelp Forest, Marine Environment and Seabirds.

**Great Basin National Park. For Teachers: Curriculum Materials. 2006.**

<http://www.nps.gov/grba/forteachers/curriculummaterials.htm>. Accessed

September 17, 2009.

*Explore the Great Basin* is a resource and activity guide for teachers. While the guide was designed with middle school students in mind, the information and activities can be adapted for any age group. Materials and activities focus on Geology, Caves, Bats, Climate: Past and Present and Ecology: The Great Basin Desert.

**Lake Mead National Recreation Area. For Teachers: Curriculum Materials. 2009.**  
<http://www.nps.gov/lame/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational activities and curriculum: **Grade 1** – Animal Characteristics, Cactus Characteristics; **Grade 2** – Arthropods (insects and spiders), Nocturnal Animals; **Grade 3** – Desert Weather, Desert Tortoise; **Grade 4** – Plant Identification, Archeology; **Grade 5** – Geology: Landforms in motion, Recycling and trash reduction, Animal Adaptations.

**Mississippi National River and Recreation Area. For Teachers: Curriculum Materials. 2009.** <http://www.nps.gov/miss/forteachers/teacherresources.htm>. Accessed September 17, 2009.

Educational materials K-12: Aquatic Bugs, Birds, Beaks and Adaptation Fossils  
Water cycle: Incredible Journey River, Watersheds, Sedimentary Layers, Web of Life Game and Lessons from a Landscape.

**National Geographic. Xpeditions: Lesson Plans. 2008.**  
<http://www.nationalgeographic.com/xpeditions/lessons/08/g68/>. Accessed July 17, 2009.

K-12 lesson plans. The lesson plans on this site were written by educators and have been tested in the classroom. Together, they address all of the U.S. National Geography Standards, the five geography skills, and the main geographic perspectives. Topics include geography, biodiversity, bioaccumulation, mapping, physical sciences, human societies, weather, natural disasters, environmental health, etc...

**National Oceanic and Atmospheric Administration. Estuaries.gov.**  
<http://www.estuaries.gov> . Accessed September 9, 2009.

The Estuaries 101 Curriculum is comprised of four two-three week modules on estuaries. Designed for 9th–12th grade classrooms – with the flexibility to adapt to higher or lower grades – it covers key National Science Education Standards for Physical Science (Transfer of Energy and Properties, Changes in Matter), Earth Science (Structure of the Earth System), and Life Science (Interdependence of Organisms, Matter, Energy, and Organization in Living Systems).



**National Parks Service. Explore Nature. Protecting our natural resources: Air, Biology, Geology, Sounds, Water.** <http://www.nature.nps.gov/>. Accessed August 24, 2009.

Within the areas of Air, Biology, Geology, Natural Sounds and Water explore topics such as: Critical Issues, Fire Management, Global Conservation, Hazards & Safety, Help Your Parks, Inventory & Monitoring, Laws & Regulations, Partnerships, Policies & Guidance, Protecting & Restoring, Publications, Science & Research, Social Science and Sounds & Images. There are also specific areas for Students & Teachers.

**Ozark National Scenic Riverways. More than skin deep: A Teacher's Guide to Caves and Groundwater. 2007.** <http://www.nps.gov/ozar/forteachers/skin-deep.htm>. Accessed September 22, 2009.

Educational materials and curriculum for K-8: Caves, Karsts, Stalactites, Cave Biology and Bats.

**Pictured Rock National Lakeshore. Curriculum Materials: Wildlife management activity guide. 2008.** <http://www.nps.gov/piro/forteachers/wildlifemgtguide.htm>. Accessed September 23, 2009.

Curriculum and activities for grades 9-12 focusing on wildlife and wildlife management.

**Pinnacles National Monument. Curriculum Materials. 2006.** <http://www.nps.gov/pinn/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.

Educational materials for grades 4-8: Endangered species & reintroducing the California Condor.

**Point Reyes National Seashore. Curriculum Materials. 2009.** <http://www.nps.gov/pore/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.

Educational materials and curriculum focusing on: Defining Habitats, Investigating Tule Elk, Identifying Resident Birds, Monitoring Creek Health, Uncovering the San Andreas Fault, Discovering Northern Elephant Seals, Observing Pacific Gray Whales. Can order a CD with all curriculum included or download each program individually.

**University of Washington. NatureMapping Program: Teachers Corner.**

<http://www.naturemappingfoundation.org/natmap/>

NatureMapping activities and data collection protocols for K-12:  
Interconnectedness, Wildlife, Habitats, Mapping, Water, Biodiversity, Monitoring  
and Data collection.

## **Flora**

**Arches National Park. For Teachers: Curriculum Materials. 2006.**

<http://www.nps.gov/arch/forteachers/curriculummaterials.htm>. Accessed  
September 14, 2009.

Science curriculum for grades 1-6. **Grade 1** – Imaginary River Trip, Plants.  
**Grade 2** – Rocks, Preparing for Winter, Changes in Plants and Animals. **Grade 3**  
– Force, Motion & Primitive Technologies, Traveling Safely in the Desert, Living  
and Non-living Interactions. **Grade 4** – Animal Life (Animal Adaptations),  
Cultural Contributions, Water Cycle. **Grade 5** – Physical Features of the Earth,  
Physical and Chemical Changes in Matter, Plant Adaptations. **Grade 6** –  
Microorganisms of the Desert, Bighorn Sheep, Heat, Light and Sound.

**Black Canyon of the Gunnison National Park. For Teachers: Curriculum Materials.  
2009. <http://www.nps.gov/blca/forteachers/curriculummaterials.htm>.  
Accessed September 17, 2009.**

Education materials for pre-school through College. **Pre-school** - Feathers or Fur?  
Trees - Fall/Winter/Spring; **Kindergarten** - Ice, Snow, Water and Mist,  
Changing with the Seasons; **Grade 1** – Who Goes There?, The Five Senses;  
**Grade 2** – Fascinating Fossils; Weather, Weather All Around Us, Water: The  
Continuing Cycle; **Grade 3** – Dams, Globes, Maps and GPS; **Grade 4** – Die,  
Adapt or Move,  
Colorado Geology; **Grade 5** – A Watershed in Action, The Plight of the  
Gunnison Sage Grouse; **Grade 6** – Energy in Our World; **Grade 7** – The  
Magnitude of Wilderness; **Grade 9-12** – Boating and Water Safety; **Higher  
Education** - A "Land Ethic" For the Classroom: The Leopold Education Project,  
The National Park Service, Safe Boating.

**Carlsbad Caverns National Park. For Teachers: Curriculum Materials. 2007.**

<http://www.nps.gov/cave/forteachers/curriculummaterials.htm>. Accessed  
September 17, 2009.

Curriculum for K-8 focusing on: Caves, Canyon, Cactus and Critters; Ecology  
and Biology.

**Everglades National Park. For Teachers: Curriculum Materials. 2008.**  
<http://www.nps.gov/ever/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educator materials and Activity Guides: Grades 4-6 - Wildlife, Plants, Environment, Water, Natural History, Native Peoples, Songs and Vocabulary; Grades 7 & 8 – Non-Native Species.

**Department of Fish and Wildlife. Project WILD. 2009.**  
<http://wdfw.wa.gov/outreach/education/wild.htm>. Accessed July 17, 2009.

Project WILD is an interdisciplinary conservation and environmental education program emphasizing wildlife. The program is designed for educators of kindergarten through twelfth grade. Project WILD educational materials are provided to educators through practical interactive workshops. Materials include two activity guides for K-12th grade educators: the Project WILD K-12 Activity Guide focuses on wildlife and habitat, and the Project WILD Aquatic Education Activity Guide emphasizes aquatic wildlife and aquatic ecosystems.

**Florissant Fossil Beds National Monument. For Teachers: Curriculum Materials. 2007.** <http://www.nps.gov/flfo/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Curriculum for Grades 1- 12 focusing on Geology, Paleontology, Science, Evolution and History.

**Glacier Bay National Park and Preserve. For Teachers: Curriculum Materials. 2009.** <http://www.nps.gov/glba/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational materials and curriculum focusing on Sea Otters, Pacific Halibut, Dungeness Crab, Kelp Forest, Marine Environment and Seabirds.

**Great Basin National Park. For Teachers: Curriculum Materials. 2006.**  
<http://www.nps.gov/grba/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

*Explore the Great Basin* is a resource and activity guide for teachers. While the guide was designed with middle school students in mind, the information and activities can be adapted for any age group. Materials and activities focus on Geology, Caves, Bats, Climate: Past and Present and Ecology: The Great Basin Desert.

**Lake Mead National Recreation Area. For Teachers: Curriculum Materials. 2009.**  
<http://www.nps.gov/lame/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational activities and curriculum: **Grade 1** – Animal Characteristics, Cactus Characteristics; **Grade 2** – Arthropods (insects and spiders), Nocturnal Animals; **Grade 3** – Desert Weather, Desert Tortoise; **Grade 4** – Plant Identification, Archeology; **Grade 5** – Geology: Landforms in motion, Recycling and trash reduction, Animal Adaptations.

**Mississippi National River and Recreation Area. For Teachers: Curriculum Materials. 2009.** <http://www.nps.gov/miss/forteachers/teacherresources.htm>. Accessed September 17, 2009.

Educational materials K-12: Aquatic Bugs, Birds, Beaks and Adaptation Fossils  
Water cycle: Incredible Journey River, Watersheds, Sedimentary Layers, Web of Life Game and Lessons from a Landscape.

**National Geographic. Xpeditions: Lesson Plans. 2008.**  
<http://www.nationalgeographic.com/xpeditions/lessons/08/g68/>. Accessed July 17, 2009.

K-12 lesson plans. The lesson plans on this site were written by educators and have been tested in the classroom. Together, they address all of the U.S. National Geography Standards, the five geography skills, and the main geographic perspectives. Topics include geography, biodiversity, bioaccumulation, mapping, physical sciences, human societies, weather, natural disasters, environmental health, etc...

**National Oceanic and Atmospheric Administration. Estuaries.gov.**  
<http://www.estuaries.gov> . Accessed September 9, 2009.

The Estuaries 101 Curriculum is comprised of four two-three week modules on estuaries. Designed for 9th–12th grade classrooms – with the flexibility to adapt to higher or lower grades – it covers key National Science Education Standards for Physical Science (Transfer of Energy and Properties, Changes in Matter), Earth Science (Structure of the Earth System), and Life Science (Interdependence of Organisms, Matter, Energy, and Organization in Living Systems).

**National Parks Service. Explore Nature. Protecting our natural resources: Air, Biology, Geology, Sounds, Water.** <http://www.nature.nps.gov/>. Accessed August 24, 2009.

Within the areas of Air, Biology, Geology, Natural Sounds and Water explore topics such as: Critical Issues, Fire Management, Global Conservation, Hazards & Safety, Help Your Parks, Inventory & Monitoring, Laws & Regulations, Partnerships, Policies & Guidance, Protecting & Restoring, Publications, Science & Research, Social Science and Sounds & Images. There are also specific areas for Students & Teachers.

**Ozark National Scenic Riverways. More than skin deep: A Teacher's Guide to Caves and Groundwater. 2007.** <http://www.nps.gov/ozar/forteachers/skin-deep.htm>. Accessed September 22, 2009.

Educational materials and curriculum for K-8: Caves, Karsts, Stalactites, Cave Biology and Bats.

**Pictured Rock National Lakeshore. Curriculum Materials: Wildlife management activity guide. 2008.** <http://www.nps.gov/piro/forteachers/wildlifemgtguide.htm>. Accessed September 23, 2009.

Curriculum and activities for grades 9-12 focusing on wildlife and wildlife management.

**Pinnacles National Monument. Curriculum Materials. 2006.** <http://www.nps.gov/pinn/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.

Educational materials for grades 4-8: Endangered species & reintroducing the California Condor.

**Point Reyes National Seashore. Curriculum Materials. 2009.** <http://www.nps.gov/pore/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.

Educational materials and curriculum focusing on: Defining Habitats, Investigating Tule Elk, Identifying Resident Birds, Monitoring Creek Health, Uncovering the San Andreas Fault, Discovering Northern Elephant Seals, Observing Pacific Gray Whales. Can order a CD with all curriculum included or download each program individually.

**University of Washington. NatureMapping Program: Teachers Corner.**

<http://www.naturemappingfoundation.org/natmap/>

NatureMapping activities and data collection protocols for K-12:  
Interconnectedness, Wildlife, Habitats, Mapping, Water, Biodiversity, Monitoring  
and Data collection.

## **Geology, Geography and Mapping**

**Arches National Park. For Teachers: Curriculum Materials. 2006.**

<http://www.nps.gov/arch/forteachers/curriculummaterials.htm>. Accessed  
September 14, 2009.

Science curriculum for grades 1-6. **Grade 1** – Imaginary River Trip, Plants.  
**Grade 2** – Rocks, Preparing for Winter, Changes in Plants and Animals. **Grade 3**  
– Force, Motion & Primitive Technologies, Traveling Safely in the Desert, Living  
and Non-living Interactions. **Grade 4** – Animal Life (Animal Adaptations),  
Cultural Contributions, Water Cycle. **Grade 5** – Physical Features of the Earth,  
Physical and Chemical Changes in Matter, Plant Adaptations. **Grade 6** –  
Microorganisms of the Desert, Bighorn Sheep, Heat, Light and Sound.

**Big Bend National Park. For Teachers: Curriculum Materials. 2009.**

<http://www.nps.gov/bibe/forteachers/curriculummaterials.htm>. Accessed  
September 17, 2009.

Educators guides: Biodiversity for 2<sup>nd</sup> grade and Geology for 6<sup>th</sup> grade. Also  
available in Spanish.

**Bighorn National Recreation Area. For Teachers: Curriculum Materials. 2007.**

<http://www.nps.gov/bica/forteachers/curriculummaterials.htm>. Accessed  
September 17, 2009.

Educators guides for K-8: Geology Activity, Life Science, History.

**Black Canyon of the Gunnison National Park. For Teachers: Curriculum Materials. 2009.** <http://www.nps.gov/blca/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Education materials for pre-school through College. **Pre-school** - Feathers or Fur? Trees - Fall/Winter/Spring; **Kindergarten** - Ice, Snow, Water and Mist, Changing with the Seasons; **Grade 1** – Who Goes There?, The Five Senses; **Grade 2** – Fascinating Fossils; Weather, Weather All Around Us, Water: The Continuing Cycle; **Grade 3** – Dams, Globes, Maps and GPS; **Grade 4** – Die, Adapt or Move, Colorado Geology; **Grade 5** – A Watershed in Action, The Plight of the Gunnison Sage Grouse; **Grade 6** – Energy in Our World; **Grade 7** – The Magnitude of Wilderness; **Grade 9-12** – Boating and Water Safety; **Higher Education** - A "Land Ethic" For the Classroom: The Leopold Education Project, The National Park Service, Safe Boating.

**Carlsbad Caverns National Park. For Teachers: Curriculum Materials. 2007.** <http://www.nps.gov/cave/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Curriculum for K-8 focusing on: Caves, Canyon, Cactus and Critters; Ecology and Biology.

**Crater Lake National Park. For Teachers: Curriculum Materials. 2008.** <http://www.nps.gov/crla/forteachers/lessonplansandteacherguides.htm>. Accessed September 17, 2009.

Educator materials focusing on Forest and Geology curriculum.

**Exploratorium. Chaco Canyon.** <http://www.exploratorium.edu/chaco/HTML/teacher.html>. Accessed September 18, 2009.

Grade level: 3-9: Knowing North: Understanding the Relationship between Time and the Sun; Grade level: 5-8 – Modeling the Seasons.

**Florissant Fossil Beds National Monument. For Teachers: Curriculum Materials. 2007.** <http://www.nps.gov/flfo/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Curriculum for Grades 1- 12 focusing on Geology, Paleontology, Science, Evolution and History.

**Great Basin National Park. For Teachers: Curriculum Materials. 2006.**  
<http://www.nps.gov/grba/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

*Explore the Great Basin* is a resource and activity guide for teachers. While the guide was designed with middle school students in mind, the information and activities can be adapted for any age group. Materials and activities focus on Geology, Caves, Bats, Climate: Past and Present and Ecology: The Great Basin Desert.

**Lake Mead National Recreation Area. For Teachers: Curriculum Materials. 2009.**  
<http://www.nps.gov/lame/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational activities and curriculum: **Grade 1** – Animal Characteristics, Cactus Characteristics; **Grade 2** – Arthropods (insects and spiders), Nocturnal Animals; **Grade 3** – Desert Weather, Desert Tortoise; **Grade 4** – Plant Identification, Archeology; **Grade 5** – Geology: Landforms in motion, Recycling and trash reduction, Animal Adaptations.

**Lassen Volcanic National Monument. For Teachers: Curriculum Materials. 2007.**  
<http://www.nps.gov/lavo/forteachers/lessonplansandteacherguides.htm>. Accessed September 17, 2009.

Volcano lessons and activities for Grades 2-5.

**Mississippi National River and Recreation Area. For Teachers: Curriculum Materials. 2009.** <http://www.nps.gov/miss/forteachers/teacherresources.htm>. Accessed September 17, 2009.

Educational materials K-12: Aquatic Bugs, Birds, Beaks and Adaptation Fossils  
Water cycle: Incredible Journey River, Watersheds, Sedimentary Layers, Web of Life Game and Lessons from a Landscape.

**Montezuma Castle National Monument. For Teachers: Curriculum Materials. 2008.**  
<http://www.nps.gov/moca/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational materials and curriculum K-12: Geology, Biodiversity, Riparian Habitats, Wetlands, Conserving our Resources.



**Mount Rainier National Park. For Teachers: Curriculum Materials. 2008.**

<http://www.nps.gov/mora/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.

Educational materials and curriculum K-12: *Where the River begins: Nisqually River Watershed*, Volcanoes of Washington State history. Grades 5-8: *Living with a volcano in your backyard*.

**National Geographic. Xpeditions: Lesson Plans. 2008.**

<http://www.nationalgeographic.com/xpeditions/lessons/08/g68/>. Accessed July 17, 2009.

K-12 lesson plans. The lesson plans on this site were written by educators and have been tested in the classroom. Together, they address all of the U.S. National Geography Standards, the five geography skills, and the main geographic perspectives. Topics include geography, biodiversity, bioaccumulation, mapping, physical sciences, human societies, weather, natural disasters, environmental health, etc...

**National Oceanic and Atmospheric Administration. Estuaries.gov.**

<http://www.estuaries.gov> . Accessed September 9, 2009.

The Estuaries 101 Curriculum is comprised of four two-three week modules on estuaries. Designed for 9th–12th grade classrooms – with the flexibility to adapt to higher or lower grades – it covers key National Science Education Standards for Physical Science (Transfer of Energy and Properties, Changes in Matter), Earth Science (Structure of the Earth System), and Life Science (Interdependence of Organisms, Matter, Energy, and Organization in Living Systems).

**National Parks Service. Explore Nature. Protecting our natural resources: Air, Biology, Geology, Sounds, Water. <http://www.nature.nps.gov/>. Accessed August 24, 2009.**

Within the areas of Air, Biology, Geology, Natural Sounds and Water explore topics such as: Critical Issues, Fire Management, Global Conservation, Hazards & Safety, Help Your Parks, Inventory & Monitoring, Laws & Regulations, Partnerships, Policies & Guidance, Protecting & Restoring, Publications, Science & Research, Social Science and Sounds & Images. There are also specific areas for Students & Teachers.

**Ozark National Scenic Riverways. More than skin deep: A Teacher's Guide to Caves and Groundwater. 2007. <http://www.nps.gov/ozar/forteachers/skin-deep.htm>. Accessed September 22, 2009.**

Educational materials and curriculum for K-8: Caves, Karsts, Stalactites, Cave Biology and Bats.

**Petrified Forest National Park. Curriculum Materials. Rockn' Through the Ages: From Fossils to Petroglyphs. 2008.**

**<http://www.nps.gov/pefo/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.**

Education materials and activities, for grade 4-8, Rockin' Through the Ages: From Fossils to Petroglyphs, focusing on science and mathematical concepts with applications to language arts and social studies.

**Rocky Mountain National Park. Curriculum Materials: Fun Facts for Teachers.**

**2007. <http://www.nps.gov/romo/forkids/parkfun.htm>. Accessed September 23, 2009.**

In the past, Rocky Mountain National Park published Tidbits via the Internet. These Tidbits have been updated and are now a part of the Fun Facts pages which are listed on this page and also on the Fun Facts page in the For Kids section. Fun Facts on many different topics including: Environment, Ecosystems, Flora, Fauna, Geology, History, Research and Seasons.

**Saguaro National Park. Curriculum Materials. 2009.**

**<http://www.nps.gov/sagu/forteachers/lessonplansandteacherguides.htm>. Accessed September 23, 2009.**

Educational and curriculum materials and activities focusing on desert issues.

**Tuzigoot National Monument. Curriculum Materials: Curriculum. 2008.**

**<http://www.nps.gov/tuzi/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.**

Educational materials and curriculum focusing on Geology, Biodiversity, Riparian Habitat, Wetlands and Conserving our Resources.

**United States Geological Survey (USGS). Water Science for Schools. 2009.**

**<http://www.usgs.gov/water>. Then go to core science systems. Accessed July 15, 2009.**

Information on many aspects of water, along with pictures, data, maps, and an interactive center where you can give opinions and test your water knowledge.

**United States Geological Survey (USGS). Real-time Water Data for the Nation. 2009.**  
<http://waterdata.usgs.gov/nwis/rt>. Accessed July 17, 2009.

Real-time water data including stream flow, lakes and reservoirs, groundwater, water quality measurements for the US.

**University of Washington. NatureMapping Program: Teachers Corner.**  
<http://naturemappingfoundation.org/natmap>. Accessed September 24, 2009.

NatureMapping activities and data collection protocols for K-12:  
Interconnectedness, Wildlife, Habitats, Mapping, Water, Biodiversity, Monitoring and Data collection.

**Wind Cave National Park. Curriculum Materials: Hydrology Unit. 2006.**  
<http://www.nps.gov/wica/forteachers/hydrology-unit-standards-and-trunk-information.htm>. Accessed September 23, 2009.

Educational materials and activities focusing on: Watersheds, Groundwater, Cave and Karst and Pollution.

## *Water*

**Arches National Park. For Teachers: Curriculum Materials. 2006.**  
<http://www.nps.gov/arch/forteachers/curriculummaterials.htm>. Accessed September 14, 2009.

Science curriculum for grades 1-6. **Grade 1** – Imaginary River Trip, Plants. **Grade 2** – Rocks, Preparing for Winter, Changes in Plants and Animals. **Grade 3** – Force, Motion & Primitive Technologies, Traveling Safely in the Desert, Living and Non-living Interactions. **Grade 4** – Animal Life (Animal Adaptations), Cultural Contributions, Water Cycle. **Grade 5** – Physical Features of the Earth, Physical and Chemical Changes in Matter, Plant Adaptations. **Grade 6** – Microorganisms of the Desert, Bighorn Sheep, Heat, Light and Sound.

**Black Canyon of the Gunnison National Park. For Teachers: Curriculum Materials. 2009. <http://www.nps.gov/blca/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.**

Education materials for pre-school through College. **Pre-school** - Feathers or Fur? Trees - Fall/Winter/Spring; **Kindergarten** - Ice, Snow, Water and Mist, Changing with the Seasons; **Grade 1** – Who Goes There?, The Five Senses; **Grade 2** – Fascinating Fossils; Weather, Weather All Around Us, Water: The Continuing Cycle; **Grade 3** – Dams, Globes, Maps and GPS; **Grade 4** – Die, Adapt or Move, Colorado Geology; **Grade 5** – A Watershed in Action, The Plight of the Gunnison Sage Grouse; **Grade 6** – Energy in Our World; **Grade 7** – The Magnitude of Wilderness; **Grade 9-12** – Boating and Water Safety; **Higher Education** - A "Land Ethic" For the Classroom: The Leopold Education Project, The National Park Service, Safe Boating.

**Bell Museum. Distance Learning: The Watershed Game. 1998. <http://www.bellmuseum.umn.edu/>. Click “For Schools,” then click “on line activities.” The quiz is here. Accessed July 17, 2009.**

A web based quizzing game for 3-6<sup>th</sup> graders relating to watersheds.

**Bonneville Power Administration. Resources for teachers in WA, OR, ID and MT. <http://www.bpa.gov/corporate/KR/ed/page6.htm>. Accessed July 15, 2009.**

Serving students in K-12 with instructional materials about: water, hydroelectricity, energy conservation, Columbia River salmon, electrical safety, resource planning and BPA history.

**EduHound. Everything for Educators. 2009. <http://www.eduhound.com/default.cfm> Accessed September 9, 2009.**

Resources and information on most topics, including science topics such as: Agriculture, Biodiversity, Energy, Global Climate, Global Warming, Recycling, Scientific Method and Water Conservation.

**Environmental Protection Agency (EPA). Teaching Resources. 2009. <http://www.epa.gov/teachers/teachresources.htm>. Accessed July 17, 2009.**

**When you click on this page, you will get a message that says “the reported item is not found.” However, if you look on the left hand side of this page and click on Educational Resources, you will find these websites.**

EPA’s collection of websites and documents that you can use to explain environmental topics. These resources offer basic and clear information to assist you in teaching your students about the environment. Topics include air, climate change, conservation, ecosystems, human health, waste and recycling and water.

**Environmental Protection Agency. Drinking Water and Ground Water Kids' Stuff. 2006. <http://www.epa.gov/safewater/kids/index.html>. Accessed July 17, 2009.**

K-12 classroom lessons relating to aquifers, water sources, ground water, water cycle, tracking pollution, etc...

**Everglades National Park. For Teachers: Curriculum Materials. 2008. <http://www.nps.gov/ever/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.**

Educator materials and Activity Guides: Grades 4-6 - Wildlife, Plants, Environment, Water, Natural History, Native Peoples, Songs and Vocabulary; Grades 7 & 8 – Non-Native Species.

**Glacier Bay National Park and Preserve. For Teachers: Curriculum Materials. 2009. <http://www.nps.gov/glac/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.**

Educational materials and curriculum focusing on Sea Otters, Pacific Halibut, Dungeness Crab, Kelp Forest, Marine Environment and Seabirds.

**Mississippi National River and Recreation Area. For Teachers: Curriculum Materials. 2009. <http://www.nps.gov/miss/forteachers/teacherresources.htm>. Accessed September 17, 2009.**

Educational materials K-12: Aquatic Bugs, Birds, Beaks and Adaptation Fossils  
Water cycle: Incredible Journey River, Watersheds, Sedimentary Layers, Web of Life Game and Lessons from a Landscape.

**Montezuma Castle National Monument. For Teachers: Curriculum Materials. 2008. <http://www.nps.gov/moca/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.**

Educational materials and curriculum K-12: Geology, Biodiversity, Riparian Habitats, Wetlands, Conserving our Resources.

**Mount Rainier National Park. For Teachers: Curriculum Materials. 2008. <http://www.nps.gov/mora/forteachers/curriculummaterials.htm>. Accessed September 17, 2009.**

Educational materials and curriculum K-12: *Where the River begins: Nisqually River Watershed*, Volcanoes of Washington State history. Grades 5-8: *Living with a volcano in your backyard*.

**National Parks Service. Explore Nature. Protecting our natural resources: Air, Biology, Geology, Sounds, Water.** <http://www.nature.nps.gov/>. Accessed August 24, 2009.

Within the areas of Air, Biology, Geology, Natural Sounds and Water explore topics such as: Critical Issues, Fire Management, Global Conservation, Hazards & Safety, Help Your Parks, Inventory & Monitoring, Laws & Regulations, Partnerships, Policies & Guidance, Protecting & Restoring, Publications, Science & Research, Social Science and Sounds & Images. There are also specific areas for Students & Teachers.

**Saguaro National Park. Curriculum Materials. 2009.**  
<http://www.nps.gov/sagu/forteachers/lessonplansandteacherguides.htm>. Accessed September 23, 2009.

Educational and curriculum materials and activities focusing on desert issues.

**Saint Croix National Scenic Riverway. Curriculum Materials. 2009.**  
<http://www.nps.gov/sacn/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.

Educational program called Rivers are Alive. The program takes students to the river so they can learn about the diversity and interconnectedness of life within a river and the world. Includes activities and lessons.

**Tuzigoot National Monument. Curriculum Materials: Curriculum. 2008.**  
<http://www.nps.gov/tuzi/forteachers/curriculummaterials.htm>. Accessed September 23, 2009.

Educational materials and curriculum focusing on Geology, Biodiversity, Riparian Habitat, Wetlands and Conserving our Resources.

**United States Geological Survey (USGS). Water Science for Schools. 2009.**  
<http://www.usgs.gov/water>. Once you reach this link, you now go to core science systems. Accessed July 15, 2009.

Information on many aspects of water, along with pictures, data, maps, and an interactive center where you can give opinions and test your water knowledge.

**United States Geological Survey (USGS). Real-time Water Data for the Nation. 2009.**  
<http://waterdata.usgs.gov/nwis/rt>. Accessed July 17, 2009.

Real-time water data including stream flow, lakes and reservoirs, groundwater, water quality measurements for the US.

**University of Washington. NatureMapping Program: Teachers Corner.**  
<http://naturemappingfoundation.org/natmap/>. Accessed September 24, 2009.

NatureMapping activities and data collection protocols for K-12:  
Interconnectedness, Wildlife, Habitats, Mapping, Water, Biodiversity, Monitoring  
and Data collection.

**University of Wisconsin Environmental Resources Center. Give Water a Hand: for  
young people taking action in their community. 2009.**  
<http://www.uwex.edu/erc/gwah/>. Accessed July 17, 2009.

National organization that offers student materials for grades K-5 and additional  
teacher resources with free downloadable guidebook in English and Spanish.

**Washington Department of Ecology. Ecology for Educators and Students:  
Classroom Curriculum K-12. 2009.**  
<http://www.ecy.wa.gov/services/ee/curricul.html>. Accessed July 17, 2009.  
**When you click on this link, it will say “Page not Found.” However, if you  
click on the “Educators and Students” on the left side of the page, you will be  
able to access the information.**

Information and resources for Washington State educators with links to  
environmental education programs such as **Washington State Project Wet - K-  
12 activity guide on water availability and water quality issues, chemical and  
physical properties, aquatic bugs as indicators of stream health, etc. Activities  
travel through the water cycle, solve the mystery of a waterborne disease,  
discover the cumulative aspects of nonpoint pollution, and much more. This  
Excellent for use from the Spokane River, groundwater or stormwater, to the  
watersheds of Puget Sound or the Columbia River.** Also links to **Healthy Water  
Healthy People; A-Way With Waste; Discover Wetlands and Estuary  
Guides.**

**Wind Cave National Park. Curriculum Materials: Hydrology Unit. 2006.**  
[http://www.nps.gov/wica/forteachers/hydrology-unit-standards-and-trunk-  
information.htm](http://www.nps.gov/wica/forteachers/hydrology-unit-standards-and-trunk-information.htm). Accessed September 23, 2009.

Educational materials and activities focusing on: Watersheds, Groundwater, Cave  
and Karst and Pollution.

# Technology Resources

## On-Line Maps

Change Matters

<http://changematters.esri.com/Compare?im=Infrared&sy=1975&ey=2000&center=-13170868.264307385,6090309.919244725&level=12>

ArcGIS Explorer On-line

<http://www.arcgis.com/home/>

Map Bureau

<http://www.mapbureau.com/mapgallery/index.html>

ImageJ

[http://serc.carleton.edu/eyesinthesky2/week2/intro\\_imagej.html#intro](http://serc.carleton.edu/eyesinthesky2/week2/intro_imagej.html#intro)

WETMap

<http://wetmaap.org/index.html>

## Data Collection

NatureMapping

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

DNR Garmin

Program download

<http://www.dnr.state.mn.us/mis/gis/tools/arcview/extensions/DNRGarmin/DNRGarmin.html>

My NASA Data

<https://mynasadata.larc.nasa.gov/>

CLEAN

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

FDR Lake Level

<http://www.usbr.gov/pn/grandcoulee/lakelevel/index.html>

## Soils

Smithsonian Soils

[http://forces.si.edu/soils/05\\_00\\_00.html](http://forces.si.edu/soils/05_00_00.html)



## Resource Connections

Digital Library for Earth System Education  
<http://www.dlese.org/library/index.jsp>

Networked Naturalist  
<http://networkednaturalist.org/index/>

Project Budburst  
<http://neoninc.org/budburst/index.php>

Project Noah  
<http://www.projectnoah.org/>

Service, Education and Adventure  
<http://www.serviceeducationadventure.org/index.php>

Cedar River Watershed  
Video set  
<http://www.cedarriver.org/programs/watershed-report/video-library-1>

Washington STEM Education  
<http://washingtonstemeducation.org/>

World Water Monitoring  
<http://www.worldwatermonitoringday.org/default.aspx>