



Taking Care of Water Resources Lessons

Websites

General

[The Fragile Fringe: A Guide for Teaching about Coastal Wetlands](#)

This USGS sponsored site includes background information for teachers as well as activities that focus on the vital ecological role of coastal wetlands. Includes sections on wetlands loss, the Barrier Islands and Mississippi Delta. Though activities cover all grade levels, ones for elementary students are identified. Includes a glossary.
(http://www.nwrc.usgs.gov/fringe/ff_index.html)

[Kirsten Findell's Water Quotes and Poetry](#)

Dr. Findell works in The Climate Dynamics and Prediction group at The Geophysical Fluid Dynamics Lab, which is a global climate modeling center run by The National Oceanic and Atmospheric Administration. Use the material here to supplement the poetry and proverbs in the student reference book.
(<http://www.gfdl.noaa.gov/~klf/h2oquotes.html>)

[Quotations About Water](#)

The Quote Garden, a commercial site, provides a number of famous authors' thoughts about water. Use the material here to supplement the poetry and proverbs in the student reference book.
(<http://www.quote garden.com/water.html>)

[River of Words](#)

River of Words' multidisciplinary, hands-on approach to education nurtures students' creative voices through instruction and practice in art and poetry. This site features some amazing examples of student art and poetry, a source of inspiration for language arts and art extensions. Don't miss the thoughtful and moving contributions by the young Afghan refugees!
(<http://www.riverofwords.org/>)

[Water Quotes – Pausing to Think](#)

This site, part of the Northwest Kansas Groundwater Management District Number Four's webpage, lists water related quotations and poetry throughout history and from many cultures. Use the material here to supplement the poetry and proverbs in the student reference book.
(<http://www.gmd4.org/quotes.html>)



[Water Science for Schools](#)

This kid-friendly portion of the USGS website offers information on many aspects of water and includes pictures, data and maps. Parts of the web site are interactive, allowing students to give opinions and test their water knowledge. Also includes a glossary of water terms.

(<http://ga.water.usgs.gov/edu/>)

[Water, Hydrology, and Macroinvertebrates](#)

For student enrichment, GLOBE water investigations help students understand the natural environment and to what extent human activities are affecting the quality of water. An additional activity involves identification of Macroinvertebrates in water samples, which can be a valuable indicator of pollution levels.

(<http://www.globe.org.uk/activities/water/watert.htm>)

[Oceans Alive!](#)

Learn all about the global seas on this website. Topics include: the water planet, oceans in motion, life in the sea, and scientist at sea.

(<http://www.mos.org/oceans/>)

[USGS Water Data for the Nation](#)

The pages on this website provide access to water-resources data collected at approximately 1.5 million sites in all 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, American Samoa and the Commonwealth of the Northern Mariana Islands.

(<http://waterdata.usgs.gov/nwis>)

[Rivers and Coasts](#)

Information about rivers and coasts, including what happens when the two meet, can be found on this website.

(<http://www.bbc.co.uk/schools/riversandcoasts/mainmenu.shtml>)

[Journey to El Yunque](#)

Students see how a hurricane can affect the water, carbon and nitrogen cycles in a tropical environment.

(<http://www.elyunque.net/english/resources.html>)



Taking Care of Water Resources

[Especially for Kids , Office of Response and Restoration](#)

This National Oceanic and Atmospheric Administration (NOAA) sponsored website offers students links and activities about understanding and mitigating the effects of oil and hazardous materials in our waters and along our coasts.

(<http://response.restoration.noaa.gov/kids/kids.html>)

[Give Water a Hand](#)

This site helps young people team up with educators, natural resource experts and committed community members to study water issues and take action. Includes links to other helpful water web sites.

(<http://www.uwex.edu/erc/gwah/index.html>)

[H 2OUSE Water Saver Home](#)

This site provides a wealth of information about conserving water in the home. It features a virtual tour of various rooms in the house, highlighting ways water is used and can be conserved in each room. It also offers a "Water Budget Calculator" to help you calculate how much water you use at home, a garden guide with information about low water use plants, and lists the top 5 actions you can do to save water around the house. Sponsored by the California Urban Water Conservation Council.

(<http://www.h2ouse.org/>)

[International Rivers Network](#)

This organization supports local communities working to protect their rivers and watersheds. The website includes links to their "International Day of Action" and other projects. A good website for teachers looking for more information about rivers and dams.

(<http://www.irn.org/>)

[100 Tips for Conserving Water](#)

This practical and detailed list is created and sponsored by the Cascade Water Alliance. It focuses mainly on ways to save water around the home and garden.

(<http://www.ci.tukwila.wa.us/pubwks/watertips.pdf>)

[Water Use It Wisely](#)

In addition to a "100+ Ways to Conserve," this site features links to conservation organizations and local water authorities and a couple of "water-wise" games.

(<http://wateruseitwisely.com/index.php>)



[WaterShed Action](#)

The Center for Global Environmental Education and the WaterShed Partners sponsor this website that includes downloadable fact sheets on several topics including how trash affects fish and wildlife, what happens to pollutants that spill into the street, and the impacts of erosion on water quality. Each fact sheet includes a link to a service learning project, which might suggest ideas for the Protecting Water Resources Project. Though the fact sheets are written above grade-level, both teachers and students will find that essential information enriches several of the Watery Earth unit's lessons.

(http://cgee.hamline.edu/watershed/action/background/fact_sheets.htm)

[Aquifer Virtual Field Trip](#)

On this virtual field trip, students learn amazing things about water. They learn about aquifers, how their drinking water gets to them, what other kids have to do around the world to get their water, and ideas for helping to protect this precious resource.

(<http://www.spokaneaquifer.org/kids/vfte/>)

[Down the Drain](#)

This Internet-based collaborative project will allow students to share information about water usage with other students from around the country and the world. Based on data collected by their household members and their classmates, students will determine the average amount of water used by one person in a day. They will compare this to the average amount of water used per person per day in other parts of the world.

(<http://www.k12science.org/curriculum/drainproj/>)

[Surf Your Watershed](#)

Use this website to find your local watershed . Once you locate your watershed, click on the first link, "citizen-based groups at work in this watershed," to find a listing of organizations that are working to protect water quality.

(<http://cfpub.epa.gov/surf/locate/index.cfm>)

[For Students – Earth911.com](#)

This website provides information and activities for students about environmental topics. Don't forget to check out our glossary.

(<http://earth911.com/for-students/>)

[Project WET – Worldwide Water Education](#)

The mission of Project WET is to reach children, parents, educators and communities of the world with water education.

(<http://www.projectwet.org/>)



Taking Care of Water Resources

Books

General

A Cool Drink of Water

By Barbara Kerley. (2002, National Geographic Children's Books)

Large, beautiful photographs of people using drinking water from all around the world. The photograph captions at the end of the book will inspire conversations about global water distribution and conservation. A brief, but interesting background information section at the end is a good springboard for additional study.

Fiction Books

Salmon Forest

By David Suzuki and Sarah Ellis; illustrated by Sheena Lott. (2006, Greystone Books)

During a walk in the woods with her father, Kate learns about the life cycle of the sockeye salmon, as well as its place in the larger circle of life. Interactions between water and the forest are emphasized.

Salmon Stream

By Carol Reed-Jones; illustrated by Michael S. Maydak. (2001, Dawn Publications)

Vivid illustrations from the salmon's perspective, as well as rhyming text, make this a great read aloud book. The back matter includes more scientific text about the salmon life cycle as well as a section titled "What Makes a Good Salmon Stream?"

Nonfiction Books: General

The Land Around Us: Rivers and Lakes

By Mary Tull. (2004, National Geographic Society)

This comprehensive look at rivers and lakes focuses on geography and human interactions with rivers and lakes. Bright photographs and easy-to-read text make this an excellent resource for emergent readers. Includes a glossary and a section about reading bar graphs for information.



Our Wet World

By Sneed B. Collard; illustrated by James M. Needham. (1998, Charlesbridge Publishing)
Readers will discover 13 different aquatic ecosystems as they read about the diversity of life found in the wet places on Earth. Colorful, detailed illustrations splash off the pages, and the fact-filled text provides a fascinating introduction to the flora and fauna that inhabit the waterways and oceans of our planet. Includes a glossary. Selected in 1999 by the National Science Teachers Association for an Outstanding Science Trade Book for Children award.

Rachel: The Story of Rachel Carson

By Amy Ehrlich; illustrated by Wendell Minor. (2008, Sandpiper)
As a bright and curious child, a student at Woods Hole Marine Biology Laboratory in Massachusetts, an ocean explorer, a collector of specimens, and author of the famous book *Silent Spring*, Rachel Carson lived an interesting life. The book is beautifully written in a single-page narrative, and Minor's full-color illustrations give personality to every page. Selected in 2004 by the National Science Teachers Association for an Outstanding Science Trade Book for Students award.

Water Supply: Our Impact on the Planet

By Rob Bowden. (2003, Heinemann Library)
A good introduction to the geological, social, and political implications of water use. Filled with interesting charts, colorful photographs, and thought-provoking quotes from political leaders and water researchers, this is a good reference book for fourth graders. This book takes a global view of water as a resource and may provide ideas for social studies extensions or further study.



Nonfiction Books: Water Conservation and Pollution

Come Back, Salmon: How a Group of Dedicated Kids Adopted Pigeon Creek and Brought It Back to Life

By Molly Cone; photography by Sidnee Wheelwright. (2001, Sierra Club Books for Children)

This captivating and inspirational book tells the true story of how an elementary school in Washington State cleaned up a nearby stream, stocked it with salmon, succeeded in getting salmon to live and spawn there, and involved the community in sustaining the positive effects. The project is well documented, with compelling text and wonderful photographs that describe the engagement of students at all grade levels.

A River Ran Wild: An Environmental History

By Lynne Cherry. (2002, Sandpiper)

A factual account of the history of the Nashua River of New Hampshire and Massachusetts. The story of a clear, life-sustaining river, almost irreparably polluted by textile and paper mill pollution, and finally rescued by the grassroots efforts of environmental activists. Appealing page borders chronicle the development of technology and the experiences of animals and people living in the river valley.

Oil Spill! (Let's Read and Find out Science, Stage 2)

By Melvin Berger, illustrated by Paul Mirocha. (1994, Harper Collins)

Beginning with the 1989 Exxon Valdez incident, this story examines the causes and devastating effects of an oil spill on the environment. Describes the effectiveness of a variety of oil-cleaning strategies and suggests ways to prevent future oil spills.

Books for Teachers

A Teacher's Guide to a Drop Around the World

By Bruce and Carol Malnor. (1997, Dawn Publications)

This teacher's guide integrates character education with core science and language arts. Lessons include poetry and songs, water habitats around the globe, and skills for living.



Water: The Fate of Our Most Precious Resource

By Marq de Villiers. (2001, Mariner Books)

Examines the political and social implications of limited water resources. Fascinating case studies highlight key contributions to water supply problems, including water pollution and misuse.

Water, a National Geographic Special Edition

(November, 1993; National Geographic Society)

This special edition contains a variety of articles about water issues in the United States and around the world. An excellent source of information about water pollution and conservation topics, this publication will inspire and intrigue teachers.

DVDs

How an Estuary Works

Educational Video Network, 2006.

The interaction of fresh and salt water in the Laguna Madre, along the Texas coast, creates a rich mix of nutrients that attracts many forms of life. Students learn about an estuary and what can be done to help preserve these fragile ecosystems.

Wetlands, Marshes, and Swamps

Educational Video Network, 2006.

This age-appropriate video explains why wetlands are important and how they form. Students also see how lakes, swamps, and marshes differ from one another.