



## Water Follows a Cycle 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](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>)



## **Water Follows a Cycle**

### **[Earth Guide Diagrams: Water Cycle](#)**

This interactive website allows students to manipulate the water cycle to learn where water exists, how it moves, and how it changes form.

(<http://earthguide.ucsd.edu/earthguide/diagrams/watercycle/>)

### **[StudyJams! – Water Cycle](#)**

Water is constantly moving, but where does it go? Watch this three minute video and get the full story on the water cycle.

([http://teacher.scholastic.com/activities/studyjams/water\\_cycle/](http://teacher.scholastic.com/activities/studyjams/water_cycle/))

### **[The Water Cycle \(Environmental Protection Agency\)](#)**

This fun, interactive website allows students to learn how water moves through the water cycle.

([http://www.epa.gov/ogwdw000/kids/flash/flash\\_watercycle.html](http://www.epa.gov/ogwdw000/kids/flash/flash_watercycle.html))

### **[Droplet and the Water Cycle](#)**

A fun, interactive website that challenges students to help a drop of water avoid pitfalls and predators while they navigate through several challenging levels of the water cycle.

(<http://kids.earth.nasa.gov/droplet.html>)

### **[Major Rivers of North America](#)**

This page at WorldAtlas.com has a map and descriptions of surface water in rivers in North America. There are also links to maps of other world regions showing surface water.

( <http://www.graphicmaps.com/webimage/countrys/nariv.htm> )

### **[National Atlas of the United States](#)**

This federal government website provides an interactive format for creating maps that display various types of data. For example, it's possible to draw a map that shows dams and aquifers, and then click on a symbol to identify a specific feature. A useful tool for a social studies extension or as a resource for several Watery Earth lessons.

( <http://nationalatlas.gov/mapmaker> )



## Glaciers

### [NOVA Online | Everest | The Anatomy of a Glacier](#)

Learn all about the anatomy of a glacier on this website sponsored by Nova.  
(<http://www.pbs.org/wgbh/nova/everest/earth/glacier.html>)

### [Glaciers](#)

This interactive website allows students to adjust mountain snowfall and temperature to see a glacier grow and shrink. Students use scientific tools to measure thickness, velocity and glacial budget.  
(<http://phet.colorado.edu/en/simulation/glaciers>)

### [Fastest Glacier](#)

This video segment adapted from NOVA scienceNOW features western Greenland's Jakobshavn Glacier, dubbed the world's fastest-flowing glacier. Scientists attempt to explain why this glacier is moving at a rate that far exceeds the average speed of glaciers and is contributing to a rise in global sea level.  
(<http://www.pbs.org/wgbh/nova/teachers/earth/fastest-glacier.html>)

### [All About Glaciers](#)

This website, sponsored by the National Snow and Ice Data Center, offers students and teachers background information about glaciers.  
(<http://nsidc.org/glaciers/>)

### [Greenland's Receding Ice](#)

Background information about Greenland's receding ice can be found on this website.  
(<http://svs.gsfc.nasa.gov/stories/greenland/>)

### [Mountain of Ice : Life Cycle of a Glacier](#)

Students can follow the journey of a single snowflake as it takes a ride through a glacier, a process that can take as much as 30,000 years to complete, on this interactive website.  
(<http://www.pbs.org/wgbh/nova/vinson/glacier.html>)



## Water Follows a Cycle Lessons

### Books

#### General

##### **A Drop Around the World**

By Barbara Shaw McKinney; illustrated by Michael S. Maydak. (1998, Dawn Publications)

This book, written as a long poem, follows a drop of water on an extended journey through the water cycle. The drop moves through its liquid, solid, and gaseous states and travels from sky to land to sea and underground. In the process, the importance of water to all living things is described and explored. A teacher's guide to accompany this book (described in the "Books for Teachers" category, below) is also available.

##### **A Drop of Water: A Book of Science and Wonder**

By Walter Wick; photography by the author. (1997, Scholastic)

Beautiful photography depicts properties and states of water. As the author writes, "The results seemed magical, but not because of any photographic trick; it was only the forces of nature at work." The captions introduce many water vocabulary terms and the notes at the end of the book encourage independent investigations. Selected in 1998 by the National Science Teachers Association for an Outstanding Science Trade Book for Children award.

#### Fiction Books

##### **The Magic School Bus at the Waterworks**

By Joanna Cole; illustrated by Bruce Degen. (1988, Scholastic)

In this adventure, Ms. Frizzle and her class turn into drops of water, take a quick trip through part of the water cycle, and end up in a water treatment facility. Numerous facts about the water cycle, water pollution, and water purification are worked into the text and various sidebars.



### **The Magic School Bus Wet All Over: A Book About the Water Cycle**

By Joanna Cole; illustrated by Bruce Degen. (1996, Scholastic)

Ms. Frizzle and the kids become drops of water and move through the water cycle, learning about evaporation, condensation, and precipitation along the way.

### **The Snowflake: A Water Cycle Story**

By Neil Waldman. (2003, The Millbrook Press)

Follows a snowflake as it becomes a water droplet and journeys through all the stages of the water cycle. The droplet travels through familiar locations including rivers, farm irrigation systems, clouds, reservoirs, household tap water, and oceans (where it is swallowed by a fish), before evaporating and condensing into a snowflake once again.

## **Nonfiction Books: General**

### **The Drop in My Drink: The Story of Water on Our Planet**

By Meredith Hooper, illustrated by Chris Coady. (2008, Frances Lincoln Children's Books)

A richly illustrated speculation about the history of a drop of water. Beginning with comets crashing on Earth's surface (which may have originally brought water to our planet), to the beginning of life on Earth, the age of the dinosaurs, and up to the present day. Describes how water has shaped our planet's geology as well as its importance to all life.

### **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.

## **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.



## **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.