



ECHO School Program

Water Wizards

Grade 5-8



Summary:

Explore the unique qualities of water as we experience the physical and chemical properties of this essential element. Take a close up look at Earth as the Water Planet. Discuss local and global issues concerning the availability of clean, fresh water on the planet today. Learn what the clean water issues are concerning Lake Champlain today. Find out about stewardship actions to keep our Lake healthy.

Essential Question:

Why is water so uniquely important to life?

Focusing Questions:

Where is water on our earth?

What are the physical and chemical properties of water?

How can people be responsible for protecting water as a natural resource essential for life on the planet?

Vermont Standards and Grade Expectations

7.12 Space, Time and Matter (Physical Science)

7.15 The Universe, Earth and the Environment

Fulfills: S5 – 6: 9, 10, 12, 49 and S7 – 8: 9, 10, 12, 49

Properties of Matter, Natural Resources

Key Program Activities

- ◆ Through demonstrations, explore the percentage of water on the planet
- ◆ Learn the basic chemical configuration of water and its phases
- ◆ Vocabulary: universal solvent, solution, density, volume and mass
- ◆ Experiment with density, adhesion and cohesion
- ◆ Discuss water's essential life sustaining properties
- ◆ Plan skits that tell ways in which people can take action to protect our water supply

Web Sites:

Lake Champlain Basin Program – LCBP's mission is implementing the Lake Champlain management plan, *Opportunities for Action*. The plan's main goals are improving water quality throughout the Lake Champlain Basin, protecting the Basin's living natural resources, and preserving and enhancing the region's rich cultural and recreation resources and economic health. Questions about Lake Champlain? Visit: www.lcbp.org (Find fact sheets, news and events, great links, Champlain 2000, on-line atlas)

Lake Net - a global network of people and organizations in more than 90 countries dedicated to the conservation and sustainable development of lake ecosystems.

Visit: www.worldlakes.org

Watershed Alliance: University of Vermont – supports watershed education and water quality monitoring in Vermont middle schools, secondary schools, alternative education programs, and youth groups. To request information or to become involved with the Watershed contact: Caitrin Noel, Outreach and Education coordinator, 802.656.5428 caitrin.noel@uvm.edu

Visit: <http://www.uvm.edu/~watershd/>

Project Wet (Water Education for Teachers) – an interdisciplinary water education program for K – 12 designed to facilitate and promote awareness, appreciation, knowledge, and stewardship of Vermont’s water resources. Many activities include action steps to move students beyond the classroom to involve their families, friends, and community in their learning process. Contact: VT DEC 802.241.3789 www.vtwaterquality.org/lakespwet.htm

Field Trip:

Water Treatment Plant on Lake Street

City of Burlington, Department of Public Works

Where does my water come from? Is the water safe to drink?

For questions regarding water quality or to arrange for a tour please call 863-4501 and ask for Tom Dion.

Visit <http://www.dpw.ci.burlington.vt.us>

Bibliography:

Bruchac, Joseph, *Four Ancestors, Stories, Songs, and Poems from Native North America*, BridgeWater Books, 1996
Summary: A collection of Native American tales celebrating the wonder and mystery of the natural world, arranged under the categories “Fire,” “Earth,” “Water,” and “Air.”

Demarest, Amy B., *This Lake Alive! An Interdisciplinary Handbook for Teaching and Learning about the Lake Champlain Basin*, Shelburne Farms, 1997.

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