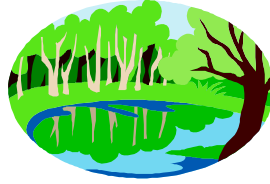


Reading the River
Save Our Water
Integrating Technology with the Content Areas



Reeda Hart
Grant's Lick Elementary
Campbell County

Grade Level

Primary (Though adaptable to higher grade levels)

Objectives

While completing a computer Webquest, the students will :

- work cooperatively with a partner
- diagram and label the water cycle
- research the plants and animals living in a pond habitat
- create a database of the water usage in their families
- create a spreadsheet to compute the amount of water usage in their families
- brainstorm ways to teach their families to conserve
- write a letter suggesting a family plan

Program of Studies

Scientific Inquiry

- Students will use simple equipment (e.g., aquariums), tools (e.g., magnifiers, spoons), skills (e.g., observing, pouring), technology (e.g., video discs), and mathematics in scientific investigations.

Scientific Ways of Thinking and Working (2.1)

- Students will understand that materials can exist in different states and some common materials (e.g., water) can change states.

Patterns, Systems, Scale and Models, Constancy, and Change Over Time (2.2-2.6)

- Students will understand that organisms have basic needs (e.g., air, water, nutrients, light) and can only survive when these needs are met.
- Students will examine how science fosters understanding of issues (e.g., use/misuse, availability, distribution) related to natural resources.
- Students will understand that Earth's materials are solids (e.g., rocks, soils), water (e.g., oceans), and gases (e.g., oxygen).

Writing (1.11)

- Students will use appropriate details, examples, and explanations to meet needs of audiences for authentic purposes in a variety of forms.

Core Content

SC-E-1.1.3 Materials can exist in different states--solid, liquid, and gas. Some common materials, such as water, can be changed from one state to another by heating or cooling.

SC-E-3.3.2 The world has many different environments. Distinct environments support the lives of different types of organisms. When the environment changes, some plants and animals survive and reproduce, and others die or move to new locations.

SC-E-3.3.3 All organisms, including humans, cause changes in the environment where they live. Some of these changes are detrimental to the organism or to other organisms; other changes are beneficial (e.g., dams

built by beavers benefit some aquatic organisms but are detrimental to others).

WR-E-1.4 Transactive Writing - Transactive writing is informative/persuasive writing that presents ideas and information for authentic audiences to accomplish realistic purposes like those students will encounter in their lives. In transactive writing, students will write in a variety of forms such as letters.

Materials

*Webquest available at:

<http://www.campbell.k12.ky.us/links/webquest/earth/water.html>

*A copy of the rubric for each student (found in the Webquest and attached)

Activity Procedure

This Webquest would be better done as a project for the Computer Lab, however it may be done as a whole class project on one computer.

(See attached copy of the Webquest)

The students will:

1. Look at the water cycle. Talk to partners about how ponds and rivers are formed. Diagram the water cycle.
2. Research the animals and plants of the pond using the Webquest. Make a list of plants and animals that live there. Talk to partners about why we should conserve water and keep the water clean.
3. Make a class list of ways our families use water at home. Make a database of the information.
4. Make a class spreadsheet to compute the average amount of water our families use in a week.
5. Research ideas for protecting and conserving water. Make a

plan to conserve water at home. Write a persuasive letter to convince their parents to conserve water.

The teacher will serve as trouble shooter and facilitator as students make their way through the Webquest. A center containing a computer with a spreadsheet and a center containing a computer with a database will be ready for the students as they progress through the Webquest.

Definition / Explanation of Concepts

Water never stops moving. Snow and rain fall to the earth from clouds. The rain and melted snow run downhill into rivers and lakes, sometimes crashing over waterfalls. Eventually the water flows into the ocean. During evaporation, the water turns from liquid into gas, and moves from oceans and lakes into the atmosphere where it forms clouds. Then the cycle begins all over again. It is important that students understand this process and realize that freshwater may not always be available at the time they need it. We use water for many things in our daily lives and often do not attend to the amount being wasted. From leaky faucets to watering our lawns in the middle of the day, our students can discover ways their families contribute to the problem and see how that fits into a bigger picture. They will then be capable of generating solutions to the problem and take action in their own families. Looking at the cross-section of a typical pond showing plants and animals that live at each level (the land surrounding the pond, the shallow water where plants grow, near the pond's edge, the air above the pond, the surface of the pond where air and water meet, and the open water), they will learn to conserve and take care of these habitats so that water will be available for them in the future.

Assessment

The students will be assessed following the rubric in the Webquest (See attached copy of the rubric).

Resources

Children's Literature

Locker, Thomas *Water Dance*, c. 1997, Harcourt Brace & Co.

Cherry, Lynn *A River Ran Wild*, c.1992, Harcourt Brace & Co.

Vocabulary Reinforcement Games

Word Search

<http://www.puzzlemaker.com>

Bingo

<http://www.jtsoftware.com/downloads.htm>

Content Reinforcement Games

Jeopardy

<http://www.hardin.k12.ky.us/res%5Ftechn/sbjarea/math/jeopardydirections.htm>

Name _____ Date _____

Save Our Water Rubric

	1	2	3	4	Score
Water Cycle	Begins to make a picture of the water cycle.	Draws a picture of the water cycle, showing most parts.	Draws a picture of the water cycle, showing all parts, and using some labels.	Draws a picture of the water cycle, showing and labeling all parts.	
Plant and Animal List	Begins to make a list of plants and/or animals not using the information provided.	Makes a list of plants or a list of animals in a pond, using the information provided.	Makes a list of plant and animal life of a pond, using the information provided.	Makes a list of plant and animal life of a pond, using the information provided, and includes a heading for each list.	
Database	Begins to make a list in a journal of ways to use water.	Makes a list of ways to use water in a journal and enters list in the correct cells of a database.	Makes a list of ways to use water in a journal, enters list in the correct cells, and saves work correctly.	Makes a list of ways to use water in a journal, enters list in the correct cells, saves work, and sorts data with teacher assistance.	
Spreadsheet	Begins to make a list in a journal of amounts of water usage in a day and computes the number needed for a week.	Makes a list in a journal of amounts of water usage in a week and enters information in the correct cells.	Makes a list in a journal of amounts of water usage in a week, enters information in the correct cells, and saves work correctly.	Makes a list in a journal of amounts of water usage in a week, enters information, saves work, and uses formulas with teacher assistance.	
Letter to Parents	May or may not have all 5 parts of a friendly letter, does not recognize purpose or audience.	Letter shows all 5 parts of a friendly letter, recognizes parents as audience, shows purpose is to convince them to save water, includes no supportive examples from research.	Letter shows all 5 parts of a friendly letter, recognizes parents as audience, shows purpose is to convince them to save water, includes a few supportive examples from research.	Letter shows all 5 parts of a friendly letter, recognizes parents as audience, shows purpose is to convince them to save water, and provides effective examples from research.	



Great Web Sites

Reeda Hart

Grant's Lick Elementary

Campbell County

- Math Jeopardy Games
<http://www.hardin.k12.ky.us/res%5Ftechn/sbjarea/math/mathjeopardy.htm>
- Interactive Power Point (Quiz Bowl) and More Jeopardy Games
<http://www.jcpslijefferson.k12.ky.us:jcpsli/refeatured.html>
- Blank Jeopardy Board and Directions
<http://www.hardin.k12.ky.us/res%5Ftechn/sbjarea/math/jeopardydirections.htm>
- Power Point Viewer
<http://www.hardin.k12.ky.us/res%5Ftechn/ktlchandout.htm>
- Webquests
<http://www.campbell.k12.ky.us/links/webquest/index.htm>
<http://www.fayette.k12.ky.us/instructtech/trt1/activities.htm>
http://www.hardin.k12.ky.us/res_techn/countywebquests.htm
<http://www.edweb.sdsu.edu/webquest/webquest.html>
- Other Gaming Fun
<http://www.quia.com>
http://www.bbc.co.uk/education/revisewise/science/living/06_act.shtml
- Bingo Maker
<http://www.jtsoftware.com/downloads.htm>
- Puzzle Maker
<http://www.puzzlemaker.com>

