



CHILDREN'S CLEAN WATER FESTIVAL

Where Youth Are Making Waves!

Watersheds

Background:

We all live in a watershed -- the area of land that catches rain and snow and that drains to a common waterway, such as a stream, lake, estuary, wetland, or even the ocean -- and our individual actions can directly affect it.

Watersheds can be large or small. Every stream, tributary, or river has an associated watershed, and small watersheds aggregate together to become larger watersheds. It is a relatively easy task to delineate watershed boundaries using a topographical map that shows stream channels. The watershed boundaries will follow the major ridge-line around the channels and meet at the bottom where the water flows out of the watershed, commonly referred to as the mouth of the stream or river.

Because the water moves downstream in a watershed, any activity that affects the water quality, quantity, or rate of movement at one location can change the characteristics of the watershed at locations downstream. For this reason, everyone living or working within a watershed needs to cooperate to ensure good watershed conditions.

Watersheds: Connecting the Watershed and the Community

CIM CORRELATION: Science

- Common Curriculum Goal: Understanding the relationships among living things and between living things and their environment: describe changes to the environment that have caused the populations of some species to change.
- Common Curriculum Goal: Describe the living and nonliving resources in a specific habitat and the adaptations of organisms to that habitat.
- Common Curriculum Goal: Recognize that the supply of many resources is limited, and that resources can be extended through recycling and decreased use.

CIM CORRELATION:: Social Sciences

- Common Curriculum Goal: Understand how people and the environment are interrelated: understand how physical environments are affected by human activities.
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- Common Curriculum Goal: Design and implement strategies to analyze issues, explain perspectives, and resolve issues using the social sciences.

Connecting the Watershed and the Community

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- **Duration:** 50 minutes
- **Goal:** This activity will help students understand interconnections between their community and their watershed.

Materials:

- Chalk and chalkboard
- Chart paper and markers
- Map (optional)

Directions:

1. As a whole group, have the students brainstorm a list of the natural features in their watershed. Record this list on the chalkboard. (If needed, use a map of the watershed to prompt responses.)
2. Divide the group into small groups of 4-5 students. Have them identify how people have used these natural features. (Include actual water use activities as well as activities that affect the watershed.) Have each group of students record their responses on chart paper.
3. Bring the group together and have each group report out their results. Post their lists on the wall. Compile these into one list and have the group add any additional ideas.
4. Discuss with the students how the human uses of the watershed have affected the quality of the water and the health of the watershed and how the community is dependent on the watershed.
5. Conclude the session with a reflection activity on the following questions:
 - *What happens if individuals and/or communities make natural resource use choices without thinking about the effect on the environment? Or the future of the community?*
 - *What happens if individuals and/or communities make any choice or decision without thinking about the impact on others, the surroundings, or the future?*

You may wish to refer to the following two lists to provide ideas to your students as they develop their own list of natural features of a watershed, and human uses of a watershed.

Natural features of a watershed:

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|-------------------|--------------------|-----------|
| • Lakes, ponds | • Estuaries | • Forests |
| • Rivers, streams | • Marshes | • Beaches |
| • Wetlands | • Caves | • Valleys |
| • Coastlines | • Hills, mountains | • Ridges |
| • Swamps | • Plains | |

Human uses of a watershed:

- Recreational – including boating, fishing, swimming, water-skiing, snow skiing, hiking, rock climbing, camping
- Water consumption – including drinking, irrigation, gardening and lawns, channeling of water
- Industrial – including thermal cooling, waste treatment
- Extraction of natural resources – including ore and mineral mining, rock quarrying, logging, commercial fishing
- Agricultural
- Housing Development
- Commercial Development

Lesson Alternative:

Assign the reflection question as a written homework assignment to be discussed in class the next day.

Resources:

- EPA's Surf Your Watershed: <http://cfpub.epa.gov/surf/locate/index.cfm>
- Adopt A Watershed: www.adopt-a-watershed.org
- The Watershed Game: <http://www.bellmuseum.org/distancelearning/watershed/watershed2.html>