

Exploration Watershed

There's a Watershed in My Backyard - Activity 3

Science, Geography

Materials

Computer(s) with Internet access
Mississippi Watershed map

Overview

Students will connect to information about conservation and protection of natural resources. They will understand how each person in a watershed – all of us – can work together to protect the quality and quantity of water for our use.

Objective

1. Students will learn the definition of a watershed.

Grade Level: 5-6

Time: 15 minutes
preparation +
40 minutes

Standards:
Physical Science
Life Science
Geography

Instant Experts

Exploring Kansas Natural Resources Educator's Guide. Unit 6 – Water Overview (101-110).
Kansas Foundation for Agriculture in the Classroom. To order, visit www.ksagclassroom.org.

What is a Watershed? PA-420. USDA-NRCS Landcare Delivers Publications & Forms.
<http://landcare.nrcs.usda.gov>

Background Information

A **watershed** is the land that water flows across or under on its way to a stream, river, or lake. Landscape is made up of many interconnected basins or watersheds. Within each watershed, all water runs to the lowest point such as a stream, river, or lake. On its way, water travels over the surface and across farms, fields, forest lands, suburban lawns, and city streets; or it seeps into the soil and travels as groundwater. Large watersheds like the ones for the Mississippi River, Columbia River, and Chesapeake Bay are made up of many smaller watersheds across several states.

Watersheds come in many different shapes and sizes. A watershed can be affected by many different activities and events. Construction of cities and towns, farming, logging, and the application and disposal of many garden and household chemicals can affect the quantity and quality of water flowing from a watershed.

Everyone lives in a watershed, and we are a part of a watershed community. The animals, birds and fish are, too! People influence what happens in watersheds, good or bad, by how the natural resources – the soil, water, air, plants, and animals – are treated. The quantity and quality of

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water draining from a watershed are dependent upon the climate, vegetation, soils, geology, and development of that watershed. Activities that change the vegetation and surface characteristics of some watersheds will affect the quantity and quality of water contributed to a stream. For example, a greater volume of water, perhaps of poorer quality, will flow from a parking lot than from a forest or pasture. This volume of water from a parking lot may result in increased flooding in a watershed because the greater volume exceeds the natural ability of the stream to transport the water. What happens in small watersheds, such as pollution, also affects the larger watersheds downstream.

Instructional Format

1. Share background information with students.
2. Upon completing the lesson, students will discuss the activity.

Procedures

1. Show the students a map of the Mississippi Watershed available from <http://commons.wikimedia.org/wiki/File:Mississippi-map.gif> and a map of the Missouri Watershed available from <http://www.water-activities.org/index.php/maps-posters/missouri-river-watershed-map.html>
2. Download a local watershed map from <http://cfpub.epa.gov/surf/locate/index.cfm> or <http://www.terra-server.com>. This map will allow your students to look at a topographical and aerial map of your town and area. You may also investigate what is your latitude and longitude and enter that data into the search; however, some of the smaller towns are not listed. The terra server information will help with mapping your watershed. Compare these with the watershed maps you are able to download.
3. Locate your watershed by going to the following website: <http://cfpub.epa.gov/surf/locate/index.cfm>. Type the name of your town and Kansas, and a Kansas map will appear.
4. Click on your general area on the map, and it will show your watershed and adjacent towns in your watershed.
5. You will need to “superimpose” this map over a map of Kansas to determine all the stream and river names in your watershed. You may also refer to the map on page 117 in *Exploring Kansas Natural Resources Educator’s Guide*, provided by Kansas Foundation for Agriculture in the Classroom.
6. Using the information from several maps, have students combine them to create their own watershed map complete with all the creeks, ponds, rivers, and lakes. Have students use the following color code:
 - Blue: major water collection point, such as a large pond or lake
 - Green: large river
 - Orange: smaller river
 - Red: very small rivers or creeks
 - Yellow: the high points of the watershed, like the tallest hills or mountains – this is called a drainage divide
7. As a class, discuss activity.

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Resources

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Want More? Extensions

To determine how your land is being used in your watershed, visit <http://www.ks.nrcs.usda.gov/technical/RWA/index.html>. Scroll down to your watershed, and click on the watershed and pages of information.

Take a virtual tour of a watershed in Ohio. Although they get much more precipitation than Kansas, this educational experience allows students to proceed through each step of the watershed to reinforce concepts learned. Visit <http://ohiowatersheds.osu.edu/vtour/stopsix.html>.

