

Research One of Our Watersheds

Adapted from: An original Creek Connections Activity, 2003. Creek Connections, Box 10, Allegheny College, Meadville, PA 16335. <http://creekconnections.allegheny.edu>

Grade Level: Basic

Duration: 2-3 days. Depends on level of share-back.

Setting: Classroom

Summary: Students will conduct academic research on one of Pennsylvania's major watershed or a United States watershed using a variety of available resources. They share their research information with other students in the class.

Objectives: Students will be able to identify and describe Pennsylvania's major watersheds and/or US watersheds.

Vocabulary:

Related Module Resources:

- What is a Watershed PowerPoint presentation
- Higbee Stream Map of PA

Materials (Included in Module):

- Pennsylvania Watersheds Fact Sheets
- Other fact sheets
- "Six Ways to the Sea" article from the PA Fish and Boat Commission
- What is a Watershed information packets included in the module.
- Use of various types of PA maps - road map, physiographic, geological, etc.

Additional Materials (NOT Included in Module):

- Internet

ACADEMIC STANDARDS (ENVIRONMENT AND ECOLOGY)

7th Grade

4.1.7.B Understand the role of the watershed.

- Identify and explain what determines the boundaries of a watershed.
- Explain how water enters a watershed
- Explain factors that affect water quality and flow through a watershed.

10th Grade

4.1.10.A Describe changes that occur from a stream's origin to its final outflow.

- Identify Pennsylvania's major watersheds and their related river systems.
- Describe changes by tracing a specific river's origin back to its headwaters including its major tributaries.

12th Grade

4.1.12.B Explain the relationships that exist within watersheds in the United States.

- Identify and describe the major watersheds of the United States.

BACKGROUND:

Pennsylvania can be subdivided into six major watersheds: the Susquehanna River Watershed, the Ohio River Watershed, the Delaware River Watershed, the Potomac River watershed, the Lake Erie Watershed, and the Genesee River Watershed. These watersheds vary in size, in the major waterways they contain, in population, water and land use; they differ historically, ecologically and geologically; and, each watershed is faced with different environmental and other threats. Similarities also abound between and among different watersheds in the state. This is also the case for the other major watersheds in the U.S. and around the world. As a result, watersheds offer a unique opportunity for research, comparison, and contrast.

OVERVIEW:

Students will conduct academic research on one of Pennsylvania's major watershed or a United States watershed using a variety of available resources. They share their research information with other students in the class.

PROCEDURE:

1. Assign students to research some of Pennsylvania's 6 major watersheds (combine the Potomac and Genesee as one research effort). You could also elect to have students conduct research on other major watersheds in the United States.
2. Students could use any of the following resources:
 - Fact Sheets from the Module Resource Binder
 - Posters from the Module
 - Internet
 - "Six Ways to the Sea" article from the PA Fish and Boat Commission
 - What is a Watershed information packets included in the module.
 - Use of various types of PA maps - road map, physiographic, geological, etc.
3. Distribute the enclosed assignment sheet or create one of your own. Indicate that students will write a short paper (if desired) or give a short oral presentation on their watershed (if desired) or create a visual representation of their watershed that includes facts, figures, and artwork (this could be mimicking the "Clean Watersheds! Clean Water!" poster in the module). Ideally there should be some type of share back to the whole class so students can learn about the different watersheds, and perhaps accomplish this from peer teaching opportunities.

DISCUSSION:

Recap some of the main facts about each watershed.

Did any of Pennsylvania's major watersheds seem more important than the others? Why or why not? If you had to select one of the watersheds as the most important, which would you select? Why? What are some reasons why other watersheds are important or what is going on in those watersheds that is beneficial?

Which watershed gets the least attention and concern? Why?

EVALUATION:

- Their final report or presentation or project.
- Any test questions regarding important facts about the major watersheds.

EXTENSIONS AND MODIFICATIONS:

- Students could create quiz game questions about their watershed to be included in a big game at the end of share back time.
- Create a debate about which of the six major watersheds is the most important. Have student argue to defend their watershed's worth.

NOTES (PLEASE WRITE ANY SUGGESTIONS YOU HAVE FOR TEACHERS USING THIS ACTIVITY IN THE FUTURE):

Activity version: June 2003

