

Subjects/Target Grades
Science and Social Studies
Grades 5-9

Duration/ Location
20-25 minutes
Classroom

Materials
Per small group or student

- Copy paper cut in half
- Plastic plate
- Cup for water (25 – 50 mL)
- Creating a Watershed Model Student Activity page

Lesson One Explore: Watersheds & Nonpoint Source Pollution- pages 11 & 12 from Lesson 1

Activity Overview

Challenge students to make a model of a watershed. This will involve defining the problem, developing possible solutions, and improving designs.

Lesson Procedure

- 1) For creation of their models, provide each pair of students with a half sheet of copy paper and a plastic plate. Instruct them to make their watershed model and to record information about their model on the Creating a Watershed Model handout.
- 2) Ask students to describe their models. Most likely the models won't resemble typical landforms of a Midwest watershed but accept all ideas.
- 3) Show the first part of the Watersheds and Nonpoint Source Pollution video, which explains what a watershed is. [Pause at 3:07 minutes before the discussion of point and nonpoint source pollutants.]
- 4) When you are sure that your students have an understanding of watersheds, have them roll up their paper model into a ball. Then they will gently pull the corners out to create a three dimensional model. Have them identify the hills and valleys, and predict how water will flow in their modified model.
- 5) The final step is to test the model by pouring about 25 mL of water on the highest part of the model and describing the flow of water. Add food coloring to the water for effect.
- 6) Terms such as topographic divides, precipitation, evaporation, runoff, groundwater, rivers, streams, lakes, ponds, and wetlands can be applied to a discussion of their models.

Vocabulary Term

Watershed - an area of land, defined by hills and ridges, which drains to a common body of water.

Name _____

Creating a Watershed Model

Your challenge is to create a model of a watershed using a half of a piece of paper. Do not tear or write on the paper. You will eventually test your model to see if it effectively illustrates a watershed.

1. What are some types of models?
2. What do you think a watershed is?

Model 1. Design a model of a watershed that will show how a watershed works.

Sketch and label the model:	How can you test your model?
	What do you predict will happen when you test your model?

Model 2. Your teacher will give you directions in how to modify your model and how to test it.

Sketch and label the model:	What do you predict will happen when you test your model?
	What happened when you tested your model?

3. How did Model 2 improve your understanding of a watershed?