



Explorations in Agriculture



WAD-A- WATERSHED

PURPOSE

Students will understand the basic geography of a watershed, how water flows through the system and how people can impact the quality of our water.

TARGETED GRADE LEVEL

3rd-5th grade

MATERIALS

- 8 ½ x 11 paper (one for each student)
- 4 different colors of water soluble markers
- Spray bottles of water



ACTIVITY

1. Give each student a blank 8 ½ x 11 sheet of paper and tell them to crumple it into a tight ball. Gently open the paper, but don't flatten completely. This piece of crumpled paper represents a watershed. A watershed is the area of land where all of the water that falls in it and drains off of it goes into the same place. On your paper watershed, the highest points represent hills and the lowest wrinkles represent valleys.
2. Choose one color of water-soluble marker and instruct everyone to mark the highest points on their map (crinkled paper).
3. Choose a second color and mark the places where different bodies of water might be: creeks, rivers, lakes, etc. Most bodies of water are in lower elevations.
4. With a third color mark two to three spaces to represent human settlements: housing, factories, shopping centers, office buildings, schools, etc.
5. With a fourth color, mark two to three agricultural areas where plants and/or animals could be raised. Discuss the needs of these plants and animals (water, food, shelter) and also how the actions of the animals might impact the water.
6. Use the spray bottles to spray the finished maps. The spray represents rain (precipitation) falling into the watershed. As a team discuss observations about how water travels through the system. Some questions to ask:
 - a. What changes did you observe in the watershed maps when the water was sprayed?
 - b. What path does the water follow?
 - c. What happens to the human settlement areas – are they in the way of a raging river or crumbling hillside?
 - d. How would the flow of water through a watershed in real life affect our choice of building sites?
 - e. What happens to the agricultural areas – would the water flowing from these areas impact any other areas?
 - f. What actions do you think farmers take in real life to protect the water quality?

Continued

CLASSROOM CONNECTIONS

Science

Research what is being done to protect and restore watersheds in your area.

Social Studies

Make a map of all the watershed districts in Minnesota and/or the watershed in which you live.

ACADEMIC STANDARDS

Minnesota Social Studies Standards and Benchmarks

3.3.1.1.1 Use maps and concepts of location (relative location words and cardinal and intermediate directions) to describe places in one's community, the state of Minnesota, The United States or the world.

Minnesota Science Standards and Benchmarks

4.3.2.3.1 Identify where water collects on Earth, including atmosphere, ground and surface water, and describe how water moves through the Earth system using the processes of evaporation, condensation and precipitation.

National Agricultural Literacy Outcomes

T1. 3-5c Identify land and water conservation methods used in farming systems (wind barriers, conservation tillage, laser leveling, GPS planting, etc.)

ADDITIONAL RESOURCES

Science in your watershed – Website <http://water.usgs.gov/wsc/>

