



**Pima County Natural Resources, Parks and Recreation
Environmental Education**

**Exploring Watersheds
Elementary School - K-3 Lesson Plan**

Description: Exploring Watersheds

Students learn about the water cycle and construct a watershed model to track the movement of water through the landscape to discover the connections that plants and animals have to water.

Linked to Arizona Academic Standards: Science S4, C2, GK-4; S4, C4, GK-8; S6, C3, GK-4.

Duration: 1-2 hours

Objectives

- Students learn the definition of a watershed (a land area that drains into a body of water)
- Students understand they and everyone else live in a watershed
- Students understand how non-point source pollution as well as point source pollution can pollute a watershed
- Students construct a watershed model and observe how water moves across the landscape

Conceptual Framework:

- Renewable natural resources are replenished through natural cycles, but are still finite.
- Effective conservation practices depend on clearly defined management objectives, and understanding of natural processes and the application of knowledge from many disciplines.
- The decisions and actions of individuals and groups of people impact natural systems.

Vocabulary

Aquifer, condensation, evaporation, lake, ocean, non-point source pollution, point source pollution, pond, precipitation, ridge, river, spring, stream, valley, water body, watershed, water cycle, groundwater.

Materials:

TROW poetry book
Clipboards
Construction paper
White paper

Tape
Markers (green, blue, brown, purple, red)
Spray bottle
White board & markers

Description of Activity

1. Introduction (Optional)

Have students sitting in a circle on the ground.

Ask the students to copy you to create a rain storm.

Wind (rubbing hands together) and a few rain drops (snapping fingers), increase rain (slapping thighs, faster and faster) slower and finish.

Read a poem about water.

2. Open a discussion of the water cycle & watershed

Encourage students to describe the water cycle and introduce vocabulary.

Define watershed “A land area that drains into a body of water” Use hand gestures and have students repeat definition aloud. Write the definition on a whiteboard.

Ask students for examples of water bodies. Ask students for examples of land areas.

Write examples on a white board. Have students repeat definition with hand gestures.

3. Construct watershed model

Move to the tables.

Pass out construction paper and white paper 1 each per student and 4 small pieces of tape per student

Demonstrate the making of the mountain ranges by crumpling the white paper and taping the corners to the construction paper.

Ask the students to do that step.

Pass out markers

Demonstrate the use of each color of marker

(Note: two colors are enough for K-1st graders.

For 2-3rd graders you may want to write the key on the Whiteboard as you introduce each color. Ask students to wait until you have completed the descriptions before marking on their papers.)

Brown (trace along folds) - Ridges (define what a ridge is and even point to the ridges on the paper and mountain ridges that surround Tucson)

Blue (trace along creases) – Valley (define and describe)

Green (squiggle mark) – Farm or agricultural areas (ask students to describe the activities that occur on a farm) they should put at least 1 farm and student must decide where to put the farms)

Purple(cross hatch) –Cities (ask students to describe the activities the activities in a city)

Red (X mark) –landfills (discuss landfill or dump)

Have students share markers and complete their watershed models.

Add rain to the watersheds (spray water on each model).

4. Discussion and Wrap-up

What happens?

Do you have any water bodies? How many?

What happened to the city, farm, landfill?

How would you go about counting the watersheds? How many watersheds are there in your landscape?

6/3/11-YG

Now that you see how the watersheds function would you have put your city in a different place? How about the farms?