



## Living River of Words - Exploring Watersheds Grades K-3

*Field Study portion of a Living River of Words Arts and Science program. Students rotate through three sessions during the two – three hour field study trip.*

### **Description:**

While on a nature walk along the lower Santa Cruz River, Sweetwater Wetlands, or Agua Caliente Park students investigate the connection that plants, animals, and people have to water. Students learn about the water cycle and construct a watershed model to track the movement of water through the landscape.

**Duration:** Field Trip - session rotation 45 minutes

### **Objectives**

- Experience firsthand a wetland or riparian habitat.
- Students learn the definition of a watershed.
- 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

### **Vocabulary**

Riparian, aquatic, habitat, 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:**

Living River of Words booklet

Plants and animals photos

Clipboards

Construction paper

White paper

Tape

Markers (green, blue, brown, purple, red)

Spay bottle

White board & markers

### **Description of Activity**

1. Take the students for a short walk along the riparian habitat that you are visiting. Students make observations and inquiries about the plants and animals that live

there. The instructor guides the students to an understanding of the connections between this habitat, water, animals, plants, and people.

2. 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.

3. Open a discussion of the water cycle and 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.

4. Construct watershed model

Move to the tables.

Pass out supplies.

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

Demonstrate the use of each color of marker.

(Note: two colors are enough for K-1<sup>st</sup> graders. For 2-3<sup>rd</sup> graders you may want to write the key on the Whiteboard as you introduce each color.)

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).

5. Discussion and Wrap-up

What happens? Do you have any water bodies? How many? What happened to the city, farm, and landfill? How would you go about counting the watersheds? How many watersheds are there in your landscape? Now that you see how the watersheds function would you have put your city in a different place? How about the farms?

#### **Linked to Arizona Academic Standards:**

**Science:** SC00-03-S1C1-02, 03; SC00-03-S1C2-02; SC00-03-S4C3-01, 02, 03; SC00-01-S6C1-02, 04, 05; SC00-01-S6C3-02, 03