Settlers Didn’t Have Showers!

Water in Arizona, Then and Now

Identifying differences in the use of natural resources, then and now.

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Grade Level: 2nd Grade
Duration: 2 class periods

National Geography Standards

ELEMENT ONE: The World in Spatial Terms
Standard 1: How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information.

ELEMENT FOUR: Environment and Society
Standard 14: How human actions modify the physical environment.

Arizona Geography Strand

Concept 1: The World in Spatial Terms
PO 5. Recognize characteristics of human and physical features:
a. physical (i.e., ocean, continent, river, lake, mountain range, coast, sea, desert).

Other Arizona Standards

Strand 1: American History
Concept 5: Westward Expansion
PO 2. Identify reasons why people in the US moved westward to territories or unclaimed lands.

Mathematics Common Core Standards
Measurement and Data
2.MD.10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Overview

Students should learn about the past and present use of water, because it provides a perspective on why regions were settled and how water is utilized today in homes.

Purpose

The purpose of this lesson is to create a sense of importance regarding the water resources in Arizona.

Objectives

The student will be able to:

- Identify sources of water in Arizona
- Locate the Colorado River on a map
- Identify how water is used in the home

Materials

- Computer and projector for PowerPoint
- 1 Important Rivers, Streams, and Washes of Arizona map per student
- 1 Home Water Use worksheet per student
- Colored pencils or crayons
- Quiz and answer sheet
- PowerPoint presentation
- Water Cycle (labeled and unlabeled)

Procedures

Prior Knowledge: Students should be studying the Western Expansion of the U.S. and know people moved to the West during this time period.

SESSION ONE

1. Ask students where water comes from. Allow them time to respond and write answers on board.

2. Show PowerPoint Picture 1- Important Rivers, Streams, and Washes of Arizona. Pass out the Important Rivers, Streams, and Washes of Arizona map and colored pencils or crayons. Point out the compass rose at the top of the map and have

ARIZONA GEOGRAPHIC ALLIANCE
students name the missing cardinal directions (S,E,W) and write them in on their maps. Write the name “Colorado River” on the board and have students locate it on their maps. If necessary, help them by saying it flows from the north part of Arizona to the west (left). Ask a student to come up and point out where the Colorado River is on the slide. Have the students color where the Colorado flows. If any student guessed “rivers” at the beginning of class, be sure to circle “rivers” on the board or add it to students’ answers from the brainstorming session.

3. Show PowerPoint Picture 2- Water Cycle. Explain the Water Cycle. Have the students label their copy of the water cycle as you explain it. Circle “precipitation (rain, snow, etc.), run-off, and groundwater (water close enough to the surface to use for wells) on the board or add them to students’ answers. Have the students repeat all of the various ways that we get water by reading the circles on the board.

4. Show PowerPoint Picture 3- Colorado River. Ask students if they have been there. What does it look like from the picture? Have them point to the Colorado River that they colored on their map.

5. Show PowerPoint Picture 4- Important Rivers, Streams, and Washes of Arizona. Ask students where they think pioneers settled in Arizona. Explain that settlers made homes near water. They made homes near the Gila and Salt Rivers in Phoenix and the Santa Cruz River in Tucson. Also, the Spaniards raised cattle in the Southeastern highlands of Arizona because of groundwater. Some settled near the Colorado River in Yuma. Let’s not forget our northern Arizona settlers who used the water from the Little Colorado and Verde Rivers. Have the students find these additional rivers on the map and color them.

6. Show PowerPoint Picture 5- other water resources. Ask the students if they see any other sources of water that have not been circled on the board.

7. Ask students what water is used for now. Record these uses on another part of the board. Show PowerPoint Picture 6- Water Now.

8. Ask students about their own use of water at their homes. How do you use water at home? Allow students to discuss water use in their homes. Write on board. Have the students guess which use takes the most water.

SESSION TWO –
1. Pass out colored pencils or crayons and the Home Water Use worksheet.

2. Show PowerPoint 7- Household Water Use. Explain what the slide is showing. State that this bar graph shows they way we use the water in our homes. With this type of graph, the longer the colored area, the greater the water use. So, which colored area is the longest? If we look to the bottom, it tells us it is the bathroom. So most families use the largest amount of water in the bathroom. What is the smallest bar on the graph showing? If we look to the bottom, it tells us that the smallest bar is for the garden or the yard. So most families use the smallest amount of water on the outside area. What do you see about the last two bars? Yes, they are the same. So most families use pretty much the same amount of water in the kitchen and when washing their clothes.

3. Tell students that they are going to make their own diagram showing how most families use water in their homes. Model how to color the strips. The amount of squares will follow the bar graph in the slide.

   Bathroom = 4 squares
   Kitchen = 2 squares
   Laundry = 2 squares
   Gardening = 1 square

Demonstrate that when students add all of the squares, it equals the bottom bar graph for Home Water Use, the total.

4. Pass out quiz. Read directions and questions to the students. Review correct answers when complete.

Assessment
Mastery on the quiz will be considered 80% or higher.

Home Water Use worksheet can be graded for accuracy. Three of the 4 bar graphs done correctly will be considered mastery.

Extensions
Many parts of Arizona are a desert. The largest cities in Arizona are in the desert. Water is scarce in these parts of Arizona and we must all learn to use our water carefully. Can students help use water more carefully? Have students brainstorm ways to lessen their water use in these different parts of the home. Are there ways to use less water at school?

Draw a poster of how families use water. Divide paper into four squares and have students draw and color four pictures showing ways water is used in the home, based on what they learned from the graph.
Sources

- usgs.gov
- nps.gov
- usda.gov
- Dr. Ron Dorn, Professor of Geography, Arizona State University