

Pre-Visit Lesson: *The Importance of Water*



Lesson Overview

Conduct this pre-visit activity before the *Conservation Kids* classroom presentation to prepare students with the necessary vocabulary and content. First, students share observations about the physical properties of water, consider what they already know about water, and become familiar with new vocabulary words and scientific concepts about water. Next, they watch a short, animated video about the water cycle and water sources in Oro Valley and the Tucson Basin, using and elaborating on water vocabulary. Last, students recognize water as a natural resource, make drawings of ways we use water, and explore water's role in their lives.

Arizona Department of Education Academic Standards

Please refer to the Arizona Department of Education Academic Standards file for the ADE standards addressed by this lesson.

Learning Outcomes

Students will be able to:

- ➔ describe water using multiple senses.
- ➔ compare the solid, liquid, and gas forms of water.
- ➔ compare water with other earth materials like soil, rocks, wood, and air.
- ➔ define and describe the following vocabulary: surface water, groundwater, aquifer, precipitation, runoff, evaporation, water vapor, recycled (reclaimed) water, recharge, Central Arizona Project.
- ➔ identify places in the water cycle where water is found on Earth.
- ➔ list and describe ways that water is used.
- ➔ define "natural resource" and list examples.
- ➔ explain the importance of water as a natural resource.
- ➔ describe how a scarcity of water could affect their daily lives.

Materials

- ➔ Part One (optional materials): Pictures of water in the environment as rain, snow, rivers, lakes, puddles, runoff, etc.
- ➔ Part Two: Smart board or projector to show the 9-minute *Conservation Kids* pre-visit video located at eeexchange.org/ovck.
- ➔ Part Three: Paper, crayons/colored pencils/markers

Pre-Visit Lesson: *The Importance of Water* (continued)

Procedure (estimated time one hour)

Part One: Wondering About Water

1. Inform students that this lesson will prepare them for an upcoming presentation about water called *Conservation Kids*.

2. Use the following questions to guide a class discussion about water, modifying as needed for your students. (Optional: Enhance the discussion using pictures of water in the environment where appropriate.)

a. *Is water important to us?* (Take a variety of responses from students; be sure to include that all living things need water to live.)

b. *What can we observe about water with our five senses?* (Take a variety of responses from students; be sure to include examples for each sense - sight, sound, smell, taste, touch.)

c. *What else do we know about water?* (Take a variety of responses from students; be sure to include that water can be a solid, liquid, or gas, and that water comes from the Earth.)

d. *How is water alike or different from other objects or materials (like soil, rocks, wood, air, etc.)?* (Take a variety of responses from students; be sure to include that nothing else occurs as solid, liquid, and gas within the range of temperatures commonly found on Earth.)

e. *Where in our natural environment can we find water?*

- In washes, streams, rivers, puddles, lakes, etc. - **surface water**
- Underground between rocks, sand, and clay - **groundwater**
 - ▶ Layers of rock, sand, and clay that hold groundwater - **aquifer**
- Falling from the sky as rain, snow, sleet, or hail - **precipitation**
- Flowing down the street, in washes, etc., after it rains - **runoff**
- In the atmosphere as **water vapor**, after **evaporation** from a liquid to a gas.

Pre-Visit Lesson: *The Importance of Water* (continued)

f. *What is the **water cycle**?* The water cycle includes all the places we find water and all the ways water moves around in the environment, as a solid, liquid, or gas. Let's learn more by watching a fun video!

Part Two: *Conservation Kids Pre-Visit Video*

It is **critical** to show this 9-minute video before the classroom presentation to prepare students with the necessary vocabulary and content.

Part Three: *Can You Imagine...Life Without Water?*

1. Ask the class to brainstorm ways that we use water. List students' ideas on the board. Use prompting questions as needed to ensure that the list includes ways that students use water in their own lives (drinking, washing, cooking, cleaning, watering plants, for pets, etc.) and ways that society uses water (to grow food, to make electricity, in manufacturing processes, to carry wastes away from our homes, etc.).
2. Ask students what a **resource** is. Define resource as a source or supply that can be used when needed. Define **natural resources** as materials we use from the natural environment. These include water, air, soil, trees, and wildlife.
3. Provide students with paper and crayons/colored pencils/markers. Ask everyone to sit quietly and close their eyes as you read this short, guided visualization:

Imagine a glass of water sitting in front of you. What does the water look like? Imagine that you are very thirsty. Pretend you take a sip. What does it taste like? Imagine putting your finger in the water. What does it feel like? Now imagine that this glass of water grows until it becomes a pool big enough for you to swim in. Imagine yourself floating on the water, staring up at the sky. What does it feel like to float? Now think about your favorite place with water or your favorite way to use water. Imagine that you are in that favorite place or that you are doing that favorite thing.... Now quietly open your eyes and draw your favorite place with water or favorite way to use water.

Pre-Visit Lesson: *The Importance of Water* (continued)

4. Remind students that water is an important natural resource that is used in many ways. Ask students to turn over their paper and make a second drawing, this time of a way of using water that they think is important to everyone.

5. When students have finished, ask volunteers to share and explain their drawings. Use this to generate a discussion about the importance of water. Can you imagine life without water? Discuss how a scarcity of water would affect our daily lives. Affirm that water is essential to every living thing!

6. Ask students what questions they have about water. Discuss as time allows. List selected questions on the board and state that a special presenter named Dr. Faucet will visit soon and help the class learn more about water during the *Conservation Kids* presentation.

Extension Ideas

- Create a bulletin board display of the students' water drawings.
- Have students write short stories or poetry imagining life without water.