



Grade Level

5th and 6th

Duration

40-45 minutes (Pre-Recorded video and live, virtual instruction)

CA Standards

Grade 5- Life Sciences, Earth Sciences

Grade 6- Ecology (Life Sciences), Earth Sciences

NGSS Aligned

5-ESS2 Earth and Human Activity

5-LS2 Ecosystems: Interactions, Energy, and Dynamics

MS-LS2 Ecosystems: Interactions, Energy, and Dynamics

MS-ESS2 Earth's Systems

Lesson Overview

In this lesson students will understand the history of San Diego's water supply, the water cycle, and water capture methods. They will examine how water is imported from the Colorado River, as well as the path and cost it takes to reach our faucets in San Diego. Students will have an opportunity to learn about the flow and cycling of water, and the energy required to move water. This lesson causes students to think critically about how humans can benefit from manipulated river systems, especially in semi-arid Mediterranean climates where local water sources are scarce. Students investigate water capture methods as solutions for specific scenarios and make decisions on best practices for moving, collecting and using water.

Objective

At the end of the lesson students should be able to:

- Identify reasons why water is California's most precious resource.
- Differentiate between local water sources and imported water.
- Understand water capture methods and investigate new ways to capture water.

Materials

- Ms. Smarty-Plants™ virtual field trip video
- Ms. Smarty-Plants™ documents (printed or Google Docs Form):
 1. Vocabulary List
 2. Power Point or Google Slides Activity: "WATER: Collect it/Save it! Move it! Use it!"
 3. Google Quiz Review document
- Virtual Classroom meeting platform (ex: Google Classroom, ZOOM, Seesaw, etc.)

Lesson Procedures:

1. Pre-Activity- The "Minute with Ms. Smarty-Plants™" video is played by the teacher 1 week before the virtual fieldtrip. Students will watch this brief, fun video introducing their virtual fieldtrip to The Water Conservation Garden! In the video they will meet Ms. Smarty-Plants™ and she will introduce the lesson topic "WATER: Collect/Save It! Move it! Use it!". The "Minute with Ms. Smarty-Plants™" video will be shared in your confirmation email.
2. During Class-Ms. Smarty-Plants™ visits your class! The day of the virtual fieldtrip starts with a short video of Ms. Smarty-Plants™ in The Garden followed by a live, virtual lesson on your class's chosen platform. MSP will review how water is found almost everywhere on Earth. MSP will address how much water is on earth, salt vs. fresh, and local water resources. Students will observe rainwater harvesting and directing systems used at The Water Conservation Garden such as swales, rain barrels and living walls for water collection. Students will then participate in breakout groups for discussion.
3. KAHOOT'S Water Trivia Game
4. Animals Encounter
5. Post Activity- Based on water capture information learned on the virtual fieldtrip, students will design a solution to a water problem. This Google Slides post activity will encourage students to think critically about water issues in San Diego. On each slide students will select the ways to move the water, collect/save the water and how to use water. From those solutions, students will draw a picture with the methods they selected illustrating the water capture methods they chose. In the end, students will have created an illustrated design showcasing water capture methods learned during the field trip. To further enhance your child's experience, a free Ms. Smarty-Plants™ seed packet will be available for pickup at The Water Conservation Garden.

Teacher Resources:

The History of San Diego's Water Supply <https://www.sdcwa.org/history> (video)

Water Harvesting Workshops and Podcasts <https://thegarden.org/learn/water-harvesting-program/>

