

Water Conservation for Young Children

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Grade Level 1-2
Duration 1-2 class periods

National Standards

GEOGRAPHY

Element 5:

Environment and Society

14. How human actions modify the physical environment.
16. The changes that occur in the meaning, use, distribution, and importance of resources.

Element 6: The Uses of

Geography

18. How to apply geography to interpret the present and plan for the future.

AZ Standards

ELA

Writing

Research to Build and Present Knowledge

1.W.7 With guidance and support from adults, participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions).

2.W.7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).

Language

Conventions of Standard English

1.L.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

- Capitalize dates and names of people.
- Use end punctuation for sentences.
- Use commas in dates and to separate single words in a series.

2.L.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

- Capitalize holidays, product names, and geographic names.

MATHEMATICS

Operations and Algebra

1.OA.C.6 Fluently add and subtract within 10.

2.OA.A.1 Use addition and subtraction within 100 to solve one-step word problems. Use addition to solve two-step word problems using single-digit addends. Represent a word problem as an equation with a symbol for the unknown.

Measurement and Data

1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

2.MD.D.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

Arizona Social Science Standards

Human-environment interactions are essential aspects of human life in all societies.

1.G2.1 Compare how human activities affect culture and the environment now and in the past.

Such as agriculture, industrialization, urbanization, and human migration.

2.G1.2 Describe how human activities affect the communities and the environment of places or regions.

2.G2.3 Describe the positive and negative effects of using natural resources.

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using information presented in the graph

Mathematics Practice

1.MP.4 Model with mathematics.

SIOP Elements

<p>Preparation Adapting content Linking to past learning Strategies used</p>	<p>Scaffolding Modeling Guided practice Independent practice Comprehensible input</p>	<p>Grouping Option Whole class Small groups Partners Independent</p>
<p>Integrating Processes Reading Writing Speaking Listening</p>	<p>Application Hands on Meaningful Linked to objectives Promotes engagement</p>	<p>Assessment Individual Group Written Oral</p>

Arizona ELP Standards

Grade 1

Basic

Listening and Reading

Standard 1 By the end of each language proficiency level, an English learner can construct meaning from oral presentations and literary and informational text through grade appropriate listening, reading, and viewing.

B-2: identify key details in a variety of literary texts and presentations.

Standard 2 By the end of each language proficiency level, an English learner can determine the meaning of words and phrases in oral presentations and literary and informational text.

B-1: determine the meaning of general academic, and content-specific words and phrases, and some common expressions.

Speaking and Writing

Standard 3 By the end of each language proficiency level, an English learner can speak and write about grade appropriate complex literary and informational texts and topics.

B-1: communicate simple messages about a variety of topics, experiences, or events.

B-2: add appropriate drawings or other visual displays to clarify thoughts and feelings about a variety of topics, experiences, or events.

B-3: compose short written texts using appropriate conventions (narrative and informational).

B-4: produce writing with appropriate organization on a variety of topics, experiences, or events using sentence frames.

Grade 2

Basic

Listening and Reading

Standard 1 By the end of each language proficiency level, an English learner can construct meaning from oral presentations and literary and informational text through grade appropriate listening, reading, and viewing.

B-3: identify key details that support the main idea or message.

Standard 2 By the end of each language proficiency level, an English learner can determine the meaning of words and phrases in oral presentations and literary and informational text.

B-1: determine the meaning of frequently occurring academic and content-specific words and phrases.

Speaking and Writing

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Standard 3 By the end of each language proficiency level, an English learner can speak and write about grade appropriate complex literary and informational texts and topics.
B-3 compose informational text that includes details to develop a topic while using appropriate conventions.
B-4: produce writing with appropriate organization on a variety of topics, experiences, or events using sentence frames.

Overview

The interdependence of people and the earth's resources is an important geography concept. By focusing on the ways people use water, young children can understand the role of this resource in daily life and their own responsibilities for practicing water conservation.

Purpose

In this lesson, students will read, listen to, and discuss information from various sources on water conservation. They will then commit to one way that they will conserve water in their everyday lives. This lesson includes strategies for diverse learners (ELLs).

Key Vocabulary

conserve: to use a resource wisely

resource: something that can be used when it is needed

groundwater: water under the surface of the earth

surface water: water on the surface of the earth (lakes, rivers)

Materials

- Internet access, LCD projector, sound speakers
- Whiteboard and markers
- Water Saving PreTest
- Water Conservation Cards
- Reclosable baggies
- Crayons or colored pencils
- Water Saving Classbook Template
- Scoring Guide
- Vocabulary Cards

Objectives

The student will be able to:

1. Identify and write about strategies for water conservation.

2. Create word problems that involve adding and subtracting.
3. Create word problems from a data display.

Procedures

Prior to the Lesson: Print the Conservation Cards on as many different colors of copy paper as you have so each group has a different color. This way "lost" cards can be relocated to the group's cards. Laminate the cards if possible and put in baggies.

Gather from the school library picture/easy reader books on water conservation and during this lesson, allow students to access the books for more information and ideas. In addition, students who finish early can access the books.

SESSION ONE

Engage:

a. Create two columns on the whiteboard: Home/School and Outdoors. Have students brainstorm all the ways that people use water and have them decide under which column this water use should be written. Do not erase the columns. **(Preparation: Linking to Past Learning)**

Explore:

c. Introduce the term "Conserve." Place the word on the Word Wall. Then explain that water is a "Resource" Place the word on the Word Wall. Have several students practice filling in these two sentences by pointing to the Word Wall and picking the correct term..

Water is a ___ resource ___. We need to ___ conserve ___ water.

(Application: Linked to Objectives)

d. Have students take the Water Saving Pretest. Collect the pretests. **(Application: Promotes engagement)**

Elaborate:'

e. Now have the students watch the video at <https://www.youtube.com/watch?v=HVGdPX62q5w&feature=youtu.be> (7 min) or you can shorten and only watch about 2.5 minutes and not view the water

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saving tips and the history of how Arizona gets its water. **(Application: Linked to Objectives)**

(Scaffolding: Comprehensible input)

f. Replay the video through the part about surface water and groundwater. Sketch a piece of land on the whiteboard (brown dirt, a tree, some plants, soil under the plants, people walking on the land, etc) or create a room mural. Have 2 students come to the whiteboard/mural and play Simon Says with them. Create some directions like: Simon Says, Point where we would find surface water. Where would we find groundwater? Point to who uses surface water? Simon Says, Point to who uses groundwater? As a student “misses,” have another student come up. Play for 5 minutes. **(Application: Hands on and Promotes engagement)**
(Integrated Processes: Listening)

Explain:

g. Now replay the video about the conservation tips or just pass out the conservation cards to groups of three students. Read the cards to the students. Have students add to the original 2 columns (on the whiteboard) any new ideas that they did not think of originally. Number the ideas in each column.

(Application: Hands on and Promotes engagement)

h. Each group of three will be given the task of looking at the whiteboard and creating a tally chart or pictogram from the data. Model how to tally or create a pictogram for the first couple of items in the columns. Then ask the groups to generate 2 or more questions about the data and its answer.

Examples might be:

- Which column has more pieces of data than the other column?
- How many total ideas do we have for Home/School and Outdoors water usage?
- If we subtract our pictographs, which category has more ideas? **(Group Option: Small group, Application: Engaging, Scaffolding: Modeling)**

i. Allow time to work. Have students share out their problems and their answers.

Evaluate:

j. Have groups of three take turns in reading or using the pictures as clues to explaining each of the water conservation cards. If no one in the group can explain/read the card, they are expected to seek help from the teacher. **(Application: Hands On, Meaningful, Promotes Engagement; Integrated Processes: Reading, Listening)**

k. Explain to the students that tomorrow they will be making a class book. They will be sharing this book

with their families and others. Collect up the Conservation Cards.

SESSION TWO

a. Review from yesterday the whiteboard list of ways to save water. **(Preparation: Linking to Past Learning)**

b. Explain that today they will be selecting one of the ways on the board and doing a writing assignment. Distribute the Water Saving Classbook Template and art supplies. Model one way that you will save water by filling in the sentence frame and by drawing an illustration. Share how the assignment will be graded with the Scoring Guide. **(Scaffolding: Modeling)**

c. Have students work independently on their assignment. For students needing additional help, give them the Conservation Cards to chose from and complete their sentence and illustration.

(Assessment: Individual, Integrated Processes: Writing, Scaffolding, Comprehensible Input)

d. Have a student who finishes early, create a cover for the classbook. Assemble the writings into a classbook. Share with parents and students.

Assessment

The writing assignment can be graded according to the Scoring Guide. Mastery will be 15 points or higher on the Scoring Guide.

Give the Water Saving Pretest as a post test. Mastery will be considered 8 out of 10 correct answers.

Cut the Vocabulary Cards so the image is separate from the definition. Have students will match the correct image to its definition. Mastery will be considered 100%.

Extensions

Add a couple of pages to the back of the book. Have students take the classbook home and share it with their parents. After the parents have seen the book, they will sign the back page(s) and add their commitment to saving water.

Create a checklist of the water saving tips and have students conduct an inventory at their homes. The categories can be All the Time, Some of the Time, and Never. The students can then make word problems out of the data they have collected.

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Sources

H2O for Kids YouTube Video

<https://www.youtube.com/watch?v=HVGdPX62q5w&feature=youtu.be>

110+ Ways to Conserve Water

<http://wateruseitwisely.com/100-ways-to-conserve/>