

H₂O on the Go! Learning about Fresh and Salt Water

Author Melinda Hobbs
Grade Level 1
Duration 3 class periods

National Standards

GEOGRAPHY

Element 2: Places and Regions

5. That people create regions to interpret Earth's complexity.

AZ Standards

ELA

Writing

Text Types and Purposes

1.W.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

Research to Build and Present Knowledge

1.W.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

SCIENCE

Earth and Space Standards

1.E1U1.5 Obtain, evaluate, and communicate information about the properties of Earth materials and investigate how humans use natural resources in everyday life.

Arizona Social Science Standards

GEOGRAPHY

The use of geographic representations and tools helps individuals understand their world.

1.G.1 Use, explore and construct maps, graphs, and other geographical representations to support content focus. Key concepts include but are not limited to physical features (rivers, lakes, mountains, landforms, desert) and human features (dams, cities, parks, hospitals, schools, railroad tracks, farms, factories, houses).

SIOP Elements

Preparation

Adapting content
Linking to background
Linking to past learning
 Strategies used

Scaffolding

Modeling
 Guided practice
 Comprehensible input

Grouping Option

Whole class
Small groups
 Partners
 Independent

Integrating Processes

Reading
Writing
 Speaking
 Listening

Application

Hands on
 Meaningful
 Linked to objectives
Promotes engagement

Assessment

Individual
Group
 Written
 Oral

Arizona English Language Proficiency Standards

Grade 1

Basic

Speaking and Writing



H₂O on the Go! Learning about Fresh and Salt Water

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.

B-5: identify and describe similarities and differences within a text.

Listening, Speaking, Reading, and Writing

Standard 7 By the end of each language proficiency level, an English learner can conduct research and evaluate and communicate findings to answer questions or solve problems.

B-1: record information and observations in guided notes.

B-2: respond to a question or problem based on gathered information from provided source.

Overview

The Earth has many different habitats and it is important for students to identify and understand the different characteristics of these habitats. Two habitats that can be understood by young learners are those that involve fresh and salt water.

Purpose

In this lesson students will learn to locate and label rivers, lakes and oceans on maps. They will also make observations and record data during a guided science inquiry on fresh v. salt water. This lesson contains strategies for diverse learners (ELLs).

Key Vocabulary

ocean: large body of salt water

river: a flowing stream of water

lake: a body of water surrounded by land

fresh: kind of water from rivers and lakes

salt: kind of water from oceans

Materials

- Science notebook
- Word cards and labels
- 1 boiled egg for each group of students
- Scientific Method Using 4 Senses worksheet
- 2 cups for each group (numbered 1 and 2)
- Salt
- Water
- Stars of Informational Writing scoring guide
- Vocabulary cards
- Vocabulary Test and Answer Key
- Venn diagram

- The United States with surrounding countries and major rivers map (only use first map)

Objectives

The student will be able to:

1. Locate and label oceans, lakes and rivers on a map.
2. Record and analyze data during a scientific inquiry.
3. Identify the difference between fresh and salt water.

Procedures

Prerequisite Knowledge: Students should have been introduced to the scientific investigation.

SESSION ONE

Engage:

- a. Tell the students to sketch in their science notebook a diagram of a body of water and what animals live in the water. (Ex. They can sketch an ocean, river or a lake.) (**Preparation: linking to background knowledge**)
- b. Choose a few students to share. Pick one that drew a lake, a river and then the ocean.
- c. Compare the drawings. What is the same? What is different? (**Application: Promotes engagement**)

Explore:

- a. Name each of the types of bodies of water and create a KWL for ocean, river and lake. (**Preparation: linking to background knowledge**)
- b. Pass out the river, ocean, and lake pictures to each group with word cards (ocean, river and lake).



H₂O on the Go! Learning about Fresh and Salt Water

Have students match which picture goes with each label. **(Application: Hands on)**

- c. Choose groups to share why they matched each label and picture. **(Grouping option: small groups)**
- d. Create actions, pictures and friendly definitions for each word. **(Application: Promotes engagement)**

Explain:

- a. Pass out The United States with surrounding countries and major rivers map. Label and color the oceans blue.
- b. Then have the students color the fresh water (rivers and lakes) green.
- c. Have students draw two boxes on the map and label them ocean and fresh water. Have them color the right color into each box (blue/ocean, green/rivers and lakes) to make a legend. **(Application: Hands on) (Scaffolding: Comprehensible input)**

Elaborate:

- a. Have student analyze their coloring. Which color is there more of? What does the blue color mean? Which color is there the least amount of? What does the green color mean?
- b. Label the map with the vocabulary words (river, ocean, and lakes). **(Application: Hands on) (Scaffolding: Comprehensible input)**

SESSION TWO

Engage:

- a. Watch the Study Jams! video about aquatic ecosystems. Tell students to look for similarities and differences of salt water v. fresh water as they watch the video. (4 min) **(Application: Promotes engagement)**
<http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/aquatic-ecosystems.htm>

Explore:

- a. Play the video again. As a class, create a Venn diagram to show the similarities and differences they see in the video about fresh and salt water. **(Grouping option: Whole class)**
http://www.readwritethink.org/files/resources/interactives/venn_diagrams/

Explain:

- a. Review scientific Inquiry steps. **(Preparation: linking to background knowledge)**
- b. Pass out two cups of water to each group: cup 1 will be salt water and cup 2 will be fresh water. Make sure the cups have a number 1 and a 2 printed on them so they can record their

observations using these numbers. Pass out the Scientific Method Using 4 Senses worksheet.

- c. Tell them the big question is “How can we tell the difference between salt water and fresh water?” First have the students look at the two cups. The students can either write sentences or draw pictures of what they see. Remind them that they need to make sure their observations are recorded as 1. for cup 1 and 2. for cup 2. **(Integrated Processes: Writing) (Application: Hands on, Promotes engagement)**
- d. Do the same for the sense of hearing, touch, and smell.
- e. Pass out the egg. Go back to sight and put in egg to see if it will sink or float in cup 1 or cup 2. **(Application: Hands on, Promotes engagement)**

Elaborate:

- a. Direct them as a group to come to a consensus of which cup holds the salt water and the fresh water. **(Grouping option: Small groups)**

Evaluate:

- a. Instruct the students to walk to a part of the room if they think that cup 1 is the salt water and walk to a different part of the room if they think cup 2 is the salt water. **(Assessment: Group)**
- b. Collect data as a class as to how many groups thought cup 1 was salt or fresh water. Reveal the answer to the students.

SESSION THREE

Engage:

- a. Review the KWL and add the findings from other sessions to the chart. Add a Q to the KWL chart. Add what questions they still have or any new questions. **(Scaffolding: Comprehensible input)**

Explore:

- a. Give the students time to investigate the answers to their questions using the Internet and/or informational books. **(Integrating Processes: Reading and Writing)**
- b. Discuss what they learned and review how to write an informative paper. **(Preparation: linking to background knowledge)**

Explain:

- a. Explain they will write about either salt water or fresh water and include four facts. They can use their Scientific Method Using 4 Senses worksheet, Venn diagram, and the KWL chart posted in the room. **(Scaffolding: Comprehensible input)**



H₂O on the Go! Learning about Fresh and Salt Water

b. Model an informative paper by writing your own main idea with 3-4 supporting details. (**Scaffolding: Modeling**)

Elaborate:

a. Use these sentence frames for the ELLs or other diverse learners in your classroom.

I learned about _____. One fact I learned was _____. Another fact is _____. I also learned that _____. (**Preparation: Adapting Content**)

b. Take the students to the computer lab and have them create their writing on Pixie or a similar computer program. (**Application: Hands on, Promotes engagement**)

Evaluate:

a. Give the students The United States with surrounding countries and major rivers map and have them label oceans, rivers and lakes.

b. Grade the writing and check to see if their facts match the correct information learned about fresh and salt water. (**Assessment: Written**)

Assessment

Geography

Students will score 100% on identifying a river, a lake, and an ocean on the map.

Writing

Students will receive 4 stars or higher on the Stars of Informational Writing scoring guide on their informative paper.

Science

Students will correctly complete 90% of the Scientific Method Using 4 Senses worksheet.

Vocabulary

Students will score 80% or higher on the Vocabulary Test.

Extensions

- Have the students see which type of water does the Earth have more of. Have a discussion about why it is important for us to conserve water.

- Add the words continent, mountain, and island to their word wall. Use the series of maps listed below to teach these new terms.
http://geoalliance.asu.edu/sites/default/files/maps/Physical_1st_PO4_Colors.pdf
http://geoalliance.asu.edu/sites/default/files/maps/Physical_1st_PO4_Blanks.pdf
http://geoalliance.asu.edu/sites/default/files/maps/Physical_1st_PO4s.pdf
- Have an inflatable globe and throw the globe to different students. As they catch the globe see if they are touching water or land. This shows the students that most of the world is water. Then talk about what kind of water they are touching (salt or fresh). Is this water able to be drinking water or not? This will show them how precious our fresh water is and that we need to conserve and take care of this resource.
- Watch the Study Jams video on other biomes.
<http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/biomes.htm>

Sources

<http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/aquatic-ecosystems.htm>

<http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/biomes.htm>

The United States with surrounding countries and major rivers from Arizona Geographic Alliance
<http://geoalliance.asu.edu/azga/>

Star grading scale for Informational paper
<http://www.teacherspayteachers.com/Product/5-Star-Writing-Rubrics-227337>

Biome map from
<http://askabiologist.asu.edu/explore/biomes>

