

Get In The Zone: Ocean Zones

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Grade Level 2
Duration 2 class periods

Adapted from 6th grade lessons by Ashley Coughlin, Arizona Geographic Alliance

| National Standards | AZ Standards | Arizona Social Science Standards |
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| <p>GEOGRAPHY Element 1: The World in Spatial Terms 3. How to analyze the spatial organization of people, places, and environments on Earth's surface. Element 2: Places and Regions 4. The physical and human characteristics of places 5. People create regions to interpret Earth's complexity</p> | <p>ELA Reading Key Ideas and Details 2.RI.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. 2.RI.7 Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text. Writing 2.W.1 Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., because, and, also) to connect opinion and reasons, and provide a concluding statement or section. 2.W.8 Recall information from experiences or gather information from provided sources to answer a question.</p> <p>SCIENCE Life Science 2.L2U1.9 Analyze, and communicate evidence that organisms need a source of energy, air, water, and certain temperature conditions to survive.</p> | <p>GEOGRAPHY The use of geographic representations and tools help individuals understand their world. 2.G1.1 Use and construct maps, graphs, and other geographic representations of familiar and unfamiliar places in the world; locate physical and human features. Key physical features include but are not limited to seven continents, oceans, lakes, rivers, mountain ranges, coasts, seas, and deserts</p> |

| SIOP Elements | | |
|---|---|--|
| <p>Preparation Adapting content Linking to background 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 English Language Proficiency Standards

Stage II

Basic

Reading

Standard 4: The student will analyze text for expression, enjoyment, and response to other related content areas. The student will demonstrate knowledge of reading comprehension by:

B-9: identifying the purpose for reading specific books.

B-11: identifying characters from a literary selection heard or read.

B-12: identifying the setting from a literary selection.

B-13- identifying key events or ideas from a literary selection with sentence frames

B-15: locating information from a graphic organizer

Writing

Standard 1: The student will express his or her thinking and ideas in a variety of writing genres by:

B-4: creating expository text (e.g., labels, lists, observations, and journals) using key words and phrases based on research, observation, and/or experience with instructional support.

Standard 2: The student will identify and apply conventions of standard English in his or her written communications by:

B-4: using resources to spell words (word walls, environmental print, picture dictionaries).

Standard 5: The student will demonstrate research skills by using a variety of reference materials to complete a variety of writing tasks as evidenced by:

B-3: listing information based on collected data about objects, people or events for a class/small group report.

Overview

The ocean has distinct layers that have their own characteristics such as unique sea creatures, differing temperatures, and different pressures. The layers range from the surface layer where most ocean activities occur, to the deep dark depths of the water that scientists have yet to fully explore.

Purpose

In this lesson, students will learn the ocean layers and describe the characteristics (ocean depth and some forms of life) of each. This lesson was designed with specific support for diverse learners.

Key Vocabulary

zone or layer- specific area

marine- relating to the ocean

ocean- one of the 5 large bodies of salt water that cover the Earth

trench- a long narrow hole dug in the ground or ocean floor

Materials

- White poster or chart paper with ocean layers drawn
- Markers, crayons, or color pencils
- Clip art animal sheets
- Smartboard/projector/doc cam
- Let's Learn the Ocean Zones! Video <https://www.youtube.com/watch?v=fHVE4B-UjmM>
- *Down Down Down: Journey to the Bottom of the Sea* by Steve Jenkins
- Ocean Zones worksheets (A and B) (B is scaffolded for those who need it) and Answer Key
- Student Readings about the Zones
- Ocean Zones Assessment
- Vocabulary Cards
- Vocabulary Test and Answer Key
- Sticky notes/ Index cards

Objectives

The student will be able to:

1. Define and describe the characteristics of the five ocean layers.
2. Describe the kinds of animals in the five ocean layers.

Procedures

Prior to the lesson: Post sheets of poster or chart paper on the classroom walls depending on how many groups you'll have. Cut out that same amount of sets of sea creatures.

SESSION ONE

Engage:

- a. Ask students if they have ever visited the ocean before. Call on a few students to share their experiences. Ask students if they have a favorite ocean animal and call a few students to share. Tell the students they will be learning about the ocean and the sea animals that live there. **(Preparation: Adapting content, Linking to Background)**
- b. Divide the students into groups. Let them know they will be working with their group to figure out where different ocean animals live. Introduce the vocabulary word "zone or layer." Explain the word by showing them the zones or layers on the poster paper. **(Grouping Option: Small groups)**
- c. Divide the students into groups of 3. Let them know they will be working with their group to figure out where different ocean animals live. Introduce the vocabulary word "zone or layer." Explain the word by showing them the zones (or layers) on the poster paper. **(Grouping Option: Small groups)**

Explore:

- a. Give each group 10 minutes to discuss their decisions and post each sea creature on the poster or chart paper where they think it belongs. **(Integrating Process: Speaking and Listening)**
- b. When all groups have finished, ask various groups how they came up with the zones they chose, but before sharing with the whole class, have students share within their groups so that ELLs have an opportunity to rehearse their answers. **(Integrating Process: Speaking)**
- c. Ask groups to share out their their opinions. **(Integrating Process: Listening)**
- d. Tell students that tomorrow they will see how correct they were.

Explain:

- a. Students will watch Let's Learn the Ocean Zones video. Tell students the video only has 3 of the ocean zones.
<https://www.youtube.com/watch?v=fHVE4B-UjmM> (3.40 min) **(Application: Promotes Engagement)**
- b. Then read *Down Down Down: A Journey to the Bottom of the Sea* by Steve Jenkins and project it for students to follow along. Note: be sure to block the name of the zones on the right side of the book. Students may have the option to write notes in their science journals if they prefer. **(Integrating Process: Writing)**
- c. While reading the story, compare the ocean depths to amount of football fields or cars so students have an understanding of that measurement. (ex: 13,000 ft is 44 football fields long!) **(Preparation: Adapting Content, Scaffolding: Comprehensible Input)**

Elaborate:

- a. After reading the story, give students a couple of minutes to talk and change their ocean animal locations if needed. **(Promotes Engagement, Integrating Process: Speaking)**

Evaluate:

- a. Have students write 1) one thing they learned in the lesson and 2) one question they still have as an exit ticket (sticky note or index card). **(Assessment: Written, Application: Linked to Objectives)**

SESSION TWO

Prior to this session: pick a few Exit Tickets from SESSION ONE that have questions you know will be answered in this session and write them on the white board.

Engage:

- a. Call on a student to read the first question on the white board. Ask students for their answer to the question. Record their responses. Repeat the process until answers have been given to all of the posted questions. **(Integrating Process: Listening and Speaking, Preparation: Linking to past learning)**
- b. Tell students today they'll learn more about the names and characteristics of the ocean zones and learn the correct answers to the questions on the white board. **(Application: Linked to objectives)**

Explain:

- a. Distribute the Ocean Zone worksheet (B is scaffolded version for students that need the extra help.) to the students and show each

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ocean zone page for students by reading them out loud. Be sure to clarify any words that students may not know or understand.

(Scaffolding: Comprehensible Output)

- b. After you read each page, highlight the answers for each question and model writing on your own note sheet so students know what they will be writing. Students will color each specific zone with the color indicated afterwards.

(Scaffolding: Modeling)

Elaborate:

- a. Let students go over the correct sea animal locations themselves as a class when the notes are completed. "So where can you find a jellyfish? (ex: In the sunlight zone, the twilight zone, and the midnight zone!)" **(Application: Promotes Engagement, Integrating Process: Speaking)**

Evaluate:

- a. Give students assessment. **(Assessment: Individual, Written)** Share some of their ocean creatures with the whole class using the doc camera or have the students present their creations to the class. **(Integrating processes: Speaking)**
- b. Ask students what's something else they want to know more about for a further investigation. **(Preparation: Adapting Content)**

Assessment

ELA

Vocabulary acquisition can be assessed with the Vocabulary Test. Students will score 75% or higher on the Vocabulary Test to reach mastery.

ELA, Geography and Science

Students can be assessed with the Ocean Zones Assessment. They should name the correct ocean layer and at least two animals that live there. They should also have at least two characteristics of the ocean layer.

Extensions

- Teacher can read *A Day in the Deep* by Kevin Kurtz for students to discover more sea creatures living in the deep layers.
- Students can go on a field trip to the Odyssey aquarium.
<https://www.odyseeaquarium.com/education/field-trips-school-groups/>
- Students can create their own sea creatures and decide which ocean layer the creatures would live in based on what they learned about each layer. They can present their sea creature in a drawing or on a poster.
- Show an oceans map and explain where each of the layers are using the different colors of blue (ex: trenches near Japan).

Sources

Clip art provided copyright free from
<http://office.microsoft.com/en-us/images/>

Youtube video provided by SciShow Kids from
<https://www.youtube.com/watch?v=fHVE4B-UjmM>

Books from
<https://www.kcedventures.com/blog/layers-of-the-ocean-under-the-sea-science-activities>