

LESSON 5: THE OCEAN, THE WATER CYCLE AND OUR EVERYDAY LIVES'

Understanding Goals

- Because of the ocean's large size, the ocean is responsible for much of the water that evaporates and condenses to become rain.
 - The water cycle plays an essential role in the production of food, particularly in agriculture, by providing water through rain or irrigation.
 - Too much or too little rain has harmful consequences, such as: less food production; deaths of plants, animals, people; damaged houses, infrastructure.
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Vocabulary: water cycle, evaporation, condensation

National Science Standards

Physical Science

5-8 Properties and Changes of Properties in Matter

Thematic Strands in Social Studies, National Council for the Social Studies

People, Places, and Environment

Advance Preparation

Be ready to play YouTube user zackrz7's video at <http://www.youtube.com/watch?v=7ahvSxpIh0M> or videos/DVDs/tapes of sounds of waves.

Materials

None

Lesson Plan

Part 1A: Review (15 minutes)

If the previous lesson (Lesson 4) was not taught, do Part 1B instead.

Listen to the sounds of waves. Then spend some time discussing the homework questions from the previous class, particularly the last two questions, since they were challenging, thought-provoking questions. Have students share their answers with their neighbors and then with the rest of the class. The homework questions were:

- 1 What is cyclic causality? How is it related to the water cycle?
- 2 If it stopped raining, would that affect our drinking water supply? Why or why not? Follow the format: If it stopped raining, then our drinking water supply might _____ because _____.
- 3 What might happen to the water cycle if the ocean disappeared? Would that affect our drinking water supply? Why or why not? Follow the format: If the ocean disappeared, then our drinking water supply might _____ because _____.

Part 1B (10 min)

Have students watch the ocean and listen to its waves for a few. Gather reactions. How do they feel after listening to the waves and watching the ocean?

Part 2 (20 minutes)

If previous lesson was taught: Last time we learned how water moves from one place to the next by processes like evaporation and condensation through the water cycle.

Start from here if previous lesson was *not* taught.

Today, we're going to think about rain, which is the result of condensation of water vapor, and is a part of the water cycle.

Ask: Where does most of our rain come from? [the ocean, since it's the largest body of water]

Let's explore these questions:

- 1 Can we live normally if it never rained again? Why or why not? Consider what might happen if there's too much rain or if there's too little rain. Think broadly and creatively.
- 2 What might happen to the amount of rain that falls on earth if the ocean disappeared? What consequences might that have and why?

Answer in the format:

If the ocean disappears, the amount of rain would _____ because _____.

As a result, _____ because _____.

Divide class into 4-5 groups, and have students work together to explore these questions together. Walk around the classroom as the students discuss with one another. Give them about 15 minutes. Have students record in their notebooks.

Part 3: Share Answers (10 min)

Have each group share its answers. Students should take away that rain is essential to life, and is particularly essential to food production.

No Homework