

## Unit Assessment



It just stopped raining and now the Sun is shining, which is causing the air to warm up. Alisha decides to go outside and jump in the rain puddles on the pavement of the playground. When she comes back to the playground the next day, she notices that the puddles have all disappeared overnight, even though the puddles couldn't have soaked through the playground pavement.

1. Draw arrows and add words on the picture above to show how the puddles disappeared.
2. The Earth can be thought of as four systems (land, air, water, and living things). Two of these systems interacting caused the puddles to disappear from the playground. List which two systems you think they are and then describe how their interaction caused the puddles to disappear.

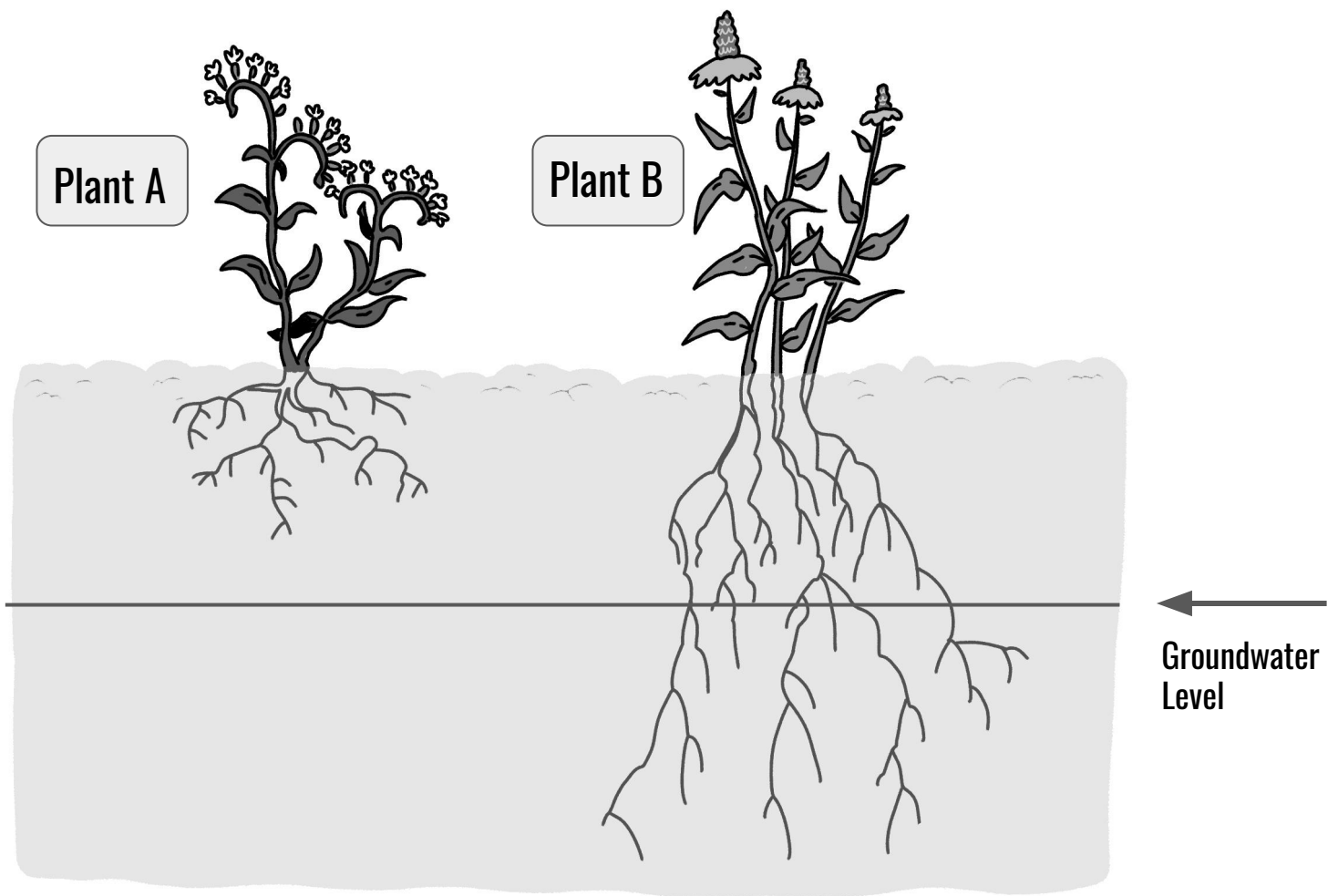
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3. Jayden is trying to grow a flower garden in his town. He wants to grow two types of plants, Plant A and Plant B. Plant A has short, shallow roots and Plant B has long, deep roots. It hasn't rained in a very long time in Jayden's town. There is groundwater below the line shown in the picture above. Draw arrows and add words to the picture above to show how each plant does or does not interact with the groundwater.

4. Jayden wants to plant more flowers in his garden, but he also wants to conserve water. He wants to choose plants that won't need to be watered with a hose. Which plant, Plant A or Plant B, is a better option for Jayden's garden? Why? Use evidence from the model above to support your answer.

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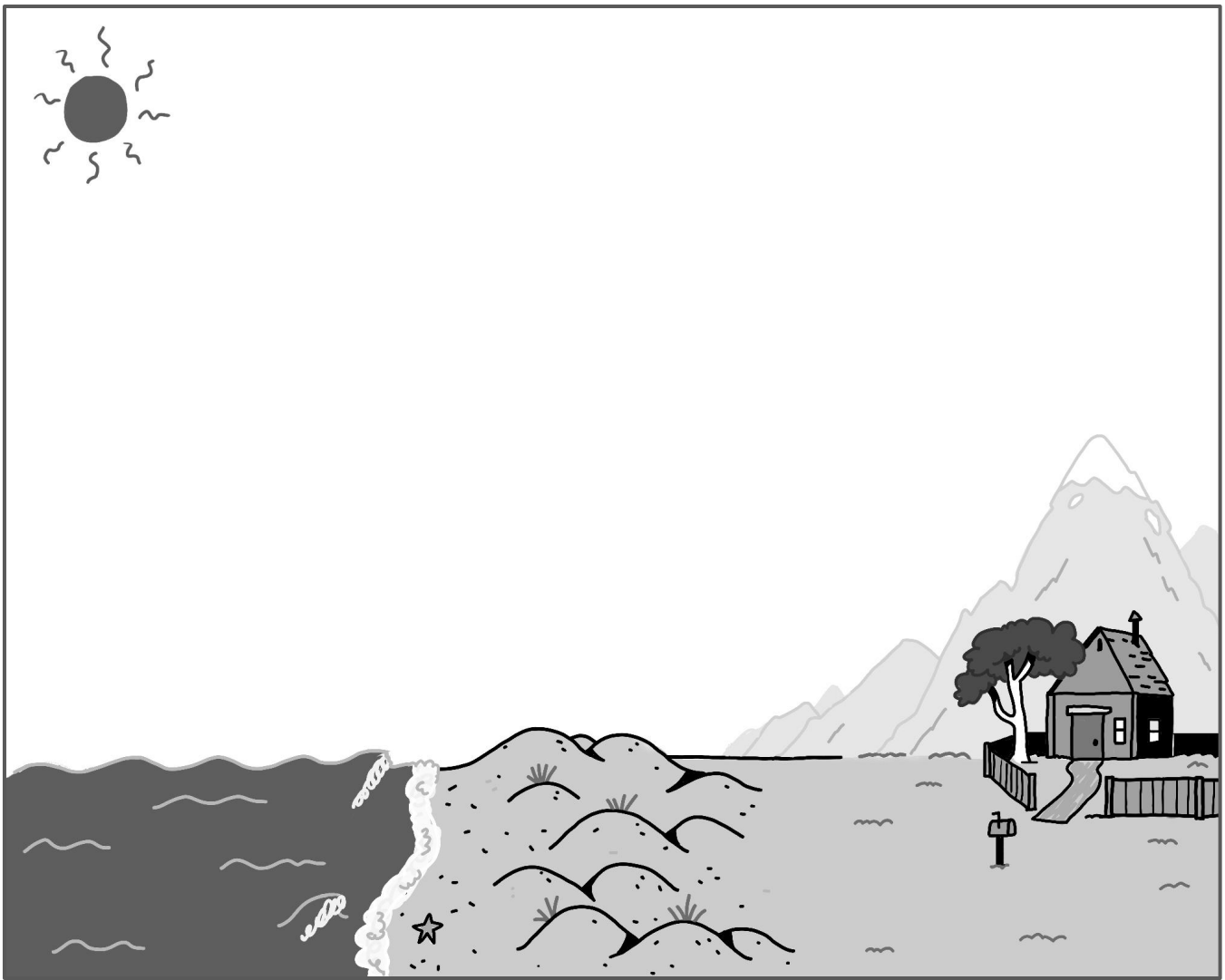
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5. Sara lives in a house near the ocean. Both the air near her house and the ocean are very warm. Draw arrows on the picture above to show how the ocean (hydrosphere) can interact with the air (atmosphere) to eventually bring rain to Sara's yard. Add labels that include these words:

**Condensation**

**Evaporation**

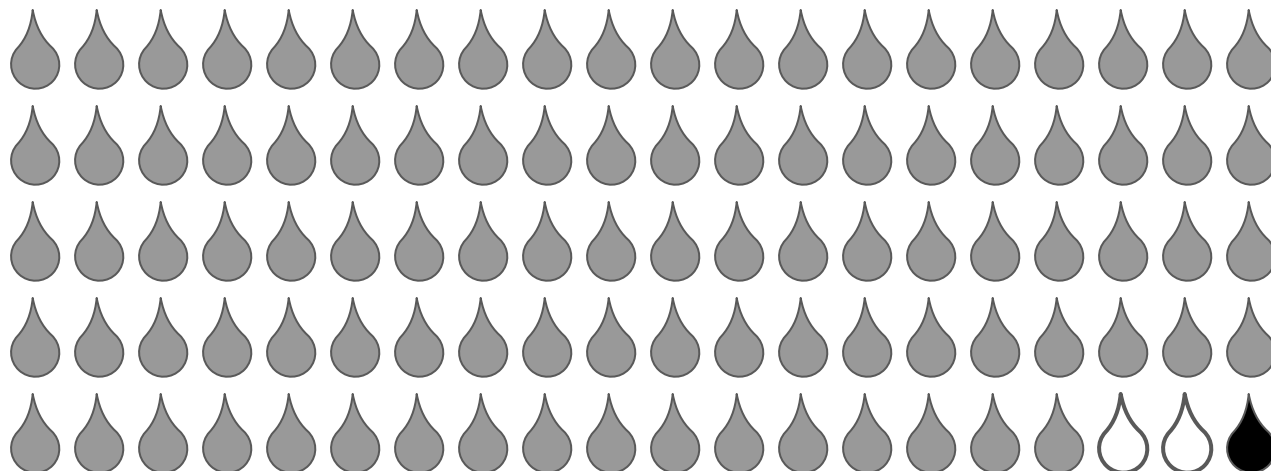
**Clouds**

**Rain**

6. If the ocean stays the same temperature, but the air above the ocean changes to become very cold, what do you predict will most likely happen?

- a. It would probably rain less in Sara's yard because there will be less evaporation.
- b. It would probably rain less in Sara's yard because there will be less condensation.
- c. It would probably rain more in Sara's yard because there will be more evaporation.
- d. It would probably rain more in Sara's yard because there will be more condensation.

# The Amount of Water on Earth



## KEY

1 drop = 1 percent



= Salt Water



= Frozen Water



= Fresh Water

The picture above is a type of graph that shows information about the amount of water on Earth. There are 100 drops to represent 100% of the water on Earth. Use this graph to help you answer Questions 7, 8, and 9.

7. How would you describe the Earth's water?

- a. Most of Earth's water is salt water. The little bit of fresh water on Earth is mostly frozen.
- b. Most of Earth's water is fresh water. The little bit of salt water on Earth is mostly frozen.
- c. Most of Earth's water is salt water. The little bit of fresh water on Earth is not frozen.
- d. Most of Earth's water is fresh water. Most of the salt water is frozen.

8. What percentage of Earth's water is NOT salt water?

- a. 1%
- b. 2%
- c. 3%
- d. 97%

9. Describe why it's important to protect the Earth's freshwater resources. Use the graph above and any other information that you know about Earth's water to support your reasoning.

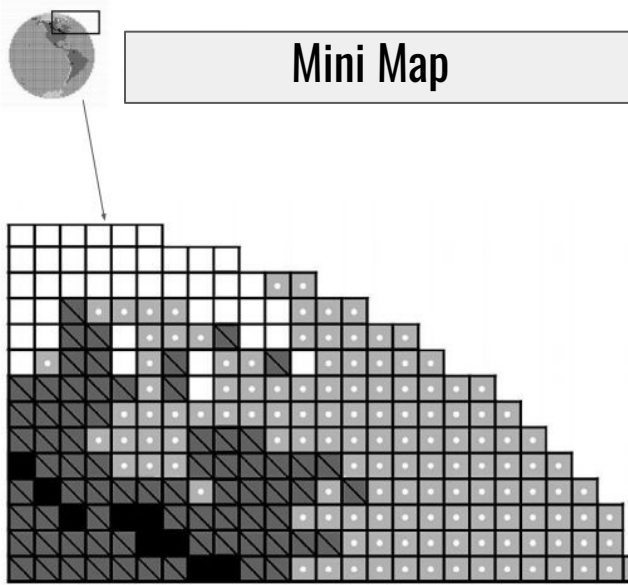
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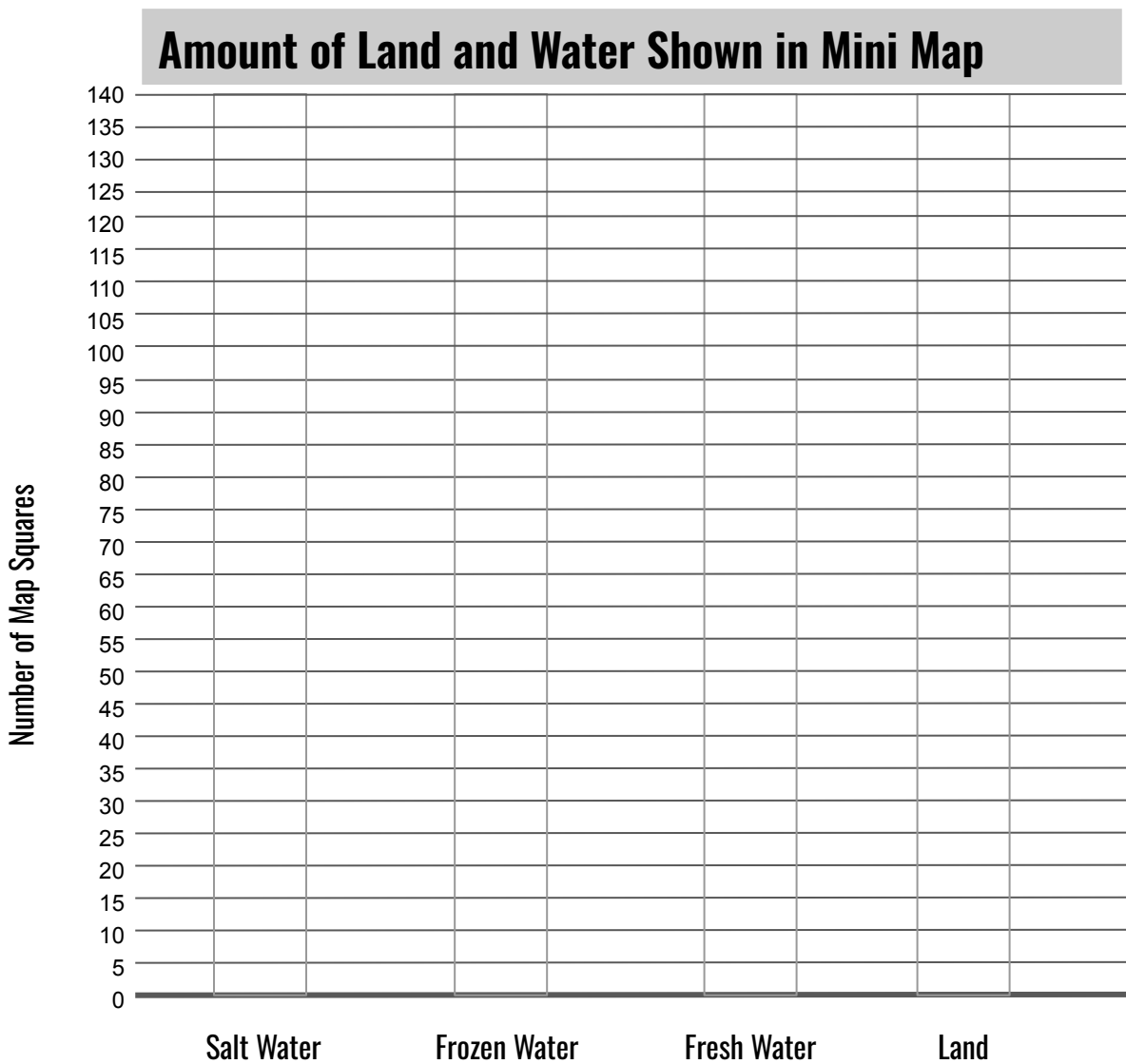
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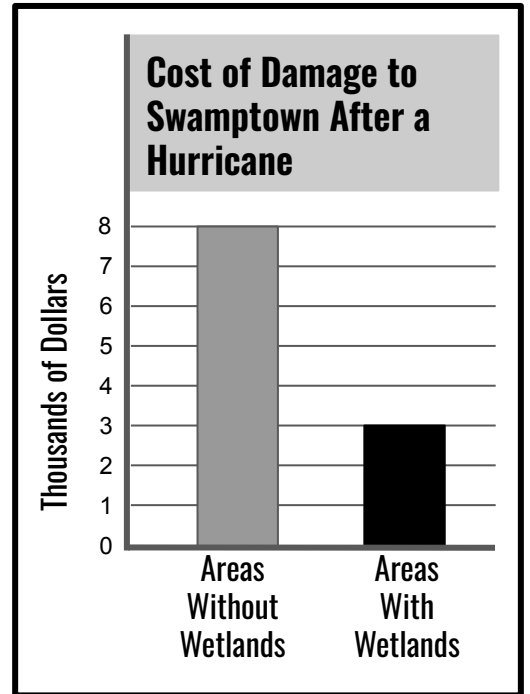
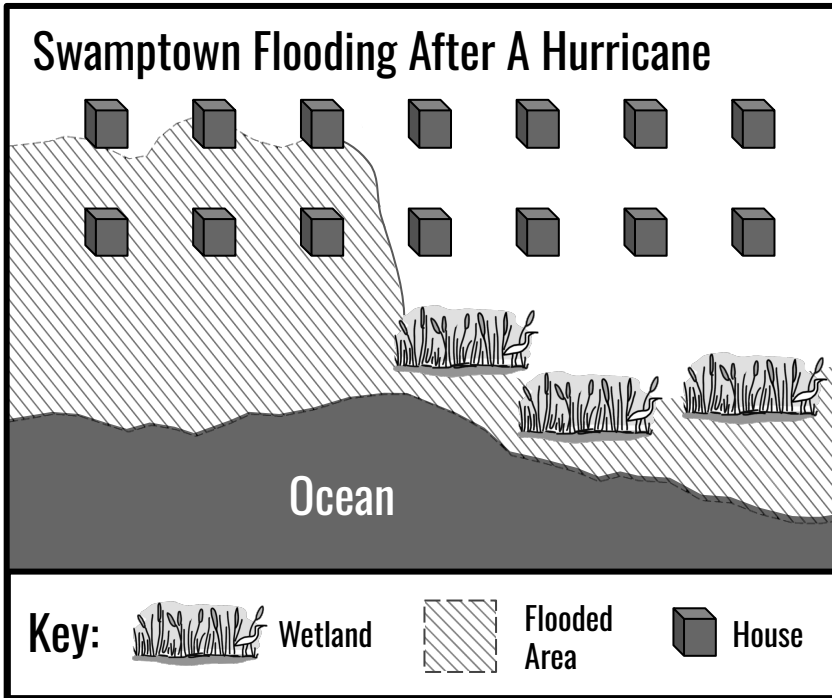
-  = Salt Water
-  = Frozen Water
-  = Fresh Water
-  = Land

10. The Mini Map above shows the land and types of water in a small part of the world. There are 130 squares of salt water, 41 squares of frozen water, 9 squares of fresh water, and 72 squares of land. Use this information to complete the bar graph below, adding gray bars to compare the types of water and the land in this area.



11. Swamptown is a city in Florida located near the ocean. The city becomes flooded almost every year after hurricanes pass through. Half of the city is protected by wetlands -- swampy areas between the ocean and dry land. The wetlands are home to many plants and animals that can't live anywhere else.

Daniel from the Acme Construction company wants to remove the wetlands and replace them with houses. Naomi, a conservation biologist, argues that Daniel shouldn't do this. Naomi thinks the people in Swamptown should protect the wetlands. You go to the library and find the following map and graph that shows what happens to Swamptown after a hurricane.



Based on the information you found, what do you think Swamptown should do? Should the city protect the wetlands? Support your answer with evidence.

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