

Name: _____ Date: _____

Answer Key: Moana's Ocean Science: Salinity and Evaporation Quest for 2nd Grade

Analyzing salt concentrations, heat energy, and vapor transformation. A challenging summative assessment measuring cause-and-effect within the global water cycle.

1. Imagine you have two bowls of ocean water. You leave one in a dark closet and one in the hot sun. Why does the water in the sun disappear faster?

Answer: A) Sunlight adds energy that turns liquid water into invisible gas.

To evaporate, water needs heat energy. The sun provides this thermal energy, speeding up the process of turning liquid into water vapor.

2. True or False: If all the clouds in the sky disappeared and never came back, the ocean would eventually run out of water.

Answer: B) False

While clouds are part of the cycle, most of Earth's water is stored in the oceans. The cycle moves water around, but it doesn't leave the planet.

3. When salt stays behind in the ocean while the water turns into vapor, the remaining ocean water becomes _____.

Answer: B) Saltier

Evaporation only removes the fresh water; the salt is left behind, which increases the salinity (saltiness) of the remaining water.

4. A scientist finds a puddle of salt on a rock near the beach. Which sequence most likely happened to create this?

Answer: C) A wave splashed, then the water evaporated

When seawater splashes on a rock, the water evaporates into the air due to heat, leaving the solid salt crystals behind.

5. True or False: Deep ocean currents can be caused by very cold, salty water sinking to the bottom because it is heavier.

Answer: A) True

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Cold, salty water is denser (heavier) than warm water, which causes it to sink and creates deep-sea movement.

6. Dust and smoke in the air help water vapor turn back into liquid drops. This stage is called _____.

Answer: B) Condensation

Condensation happens when water vapor cools down and clings to tiny particles in the air to form clouds.

7. Why is the water cycle like a giant recycling machine for the Earth?

Answer: B) Because the same water has been moving around for millions of years.

Earth's water is a closed system. The water you drink today is the same water that dinosaurs once used because it cycles continuously.

8. True or False: Most of the rain that falls on land originally evaporated from the salty ocean.

Answer: A) True

The ocean covers most of the Earth, so it is the primary source of the water vapor that later turns into rain over land.

9. If a river flows from a mountain into the ocean, it is carrying _____ down to the sea.

Answer: B) Freshwater

Runoff from mountains and rivers is usually freshwater, which flows into the ocean and mixes with the salty water.

10. Which of these would cause a big change in the ocean's 'conveyor belt' of moving water?

Answer: C) A large amount of ice melting and adding fresh water

Melting ice adds huge amounts of freshwater, which changes the density and salinity of the ocean, potentially slowing down major currents.