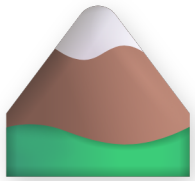
💧 The Water Cycle: Earth's Never-Ending Journey

Grade 4 Name: _____

Read the science passage carefully. Then answer the questions below.

🏔️ The Glacier's Slow Release: Water's Journey from Ice to Ocean



Begin high in the mountains, where giant rivers of ice, called glaciers, hold vast amounts of Earth's fresh water. These glaciers form over hundreds or thousands of years as snow falls and compacts into ice. They are like frozen libraries, storing water from long ago. Imagine a water molecule trapped in a glacier for centuries!

As seasons change and temperatures rise, parts of the glacier begin to melt. This process is called **melting**, where solid ice turns into liquid water. Tiny streams form, trickling down the icy slopes. These streams join together, becoming rushing rivers. This liquid water flows over the land as **surface runoff**, carving paths through valleys and carrying nutrients. The river water travels hundreds or even thousands of miles, providing drinking water for animals and people along its way.

Eventually, the river reaches the vast ocean, mixing its fresh water with the salty sea. Once in the ocean, the sun's energy warms the water, causing it to change from a liquid to a gas called water vapor. This process is called **evaporation**. The water vapor rises into the atmosphere, becoming part of the air we breathe. High in the sky, the water vapor cools and turns back into tiny liquid droplets, forming clouds. This is **condensation**. Later, these droplets grow heavy and fall back to Earth as **precipitation** – perhaps as rain over land or even as new snow on distant mountains, slowly building new glaciers, continuing the water's incredible, never-ending journey.

COMPREHENSION QUESTIONS

(1) What are glaciers described as in the passage?

(A) Giant rivers of ice that store fresh water.

(B) Fast-moving streams that carve valleys.

(C) Large lakes found high in the mountains.

(D) Clouds that form over the ocean.

(2) How does water from a glacier eventually reach the ocean?

(A) It evaporates directly from the ice and then rains into the ocean.

(B) It melts into liquid water, flows as surface runoff, and forms rivers that lead to the ocean.

(C) It is carried by strong winds from the mountains to the sea.

(D) Animals drink it and then carry it to the ocean.

(3) In the passage, the word "compacts" means...

(A) Spreads out widely. (B) Becomes tightly pressed together.

(C) Turns into a gas. (D) Flows quickly downhill.

(4) If a region experiences a long period of unusually warm temperatures, what might happen to the glaciers and the rivers they feed?

(A) The glaciers would grow larger, and the rivers would become smaller.

(B) The glaciers would melt faster, causing rivers to have more water for a time, but potentially shrink in the future.

(C) The glaciers would turn directly into clouds, and rivers would dry up completely.

(D) The warm temperatures would freeze the rivers solid.

(5) Explain in your own words why glaciers are important to the water cycle and to people.