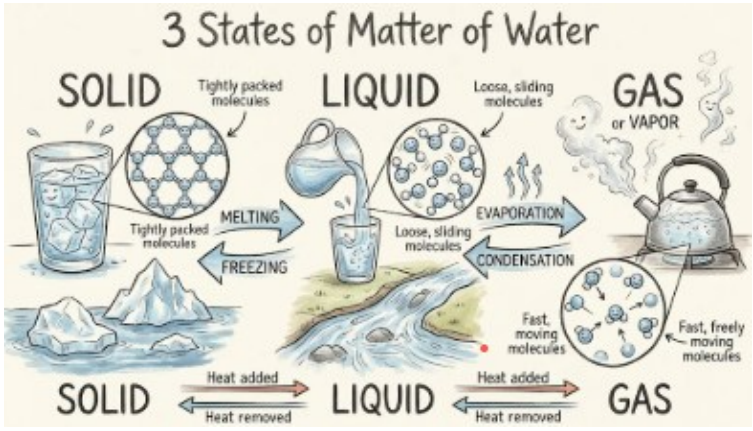
Name:_____

The Amazing Changes of Water

Water is one of the most important liquids on Earth. It can take many different forms depending on temperature. When water heats up or cools down, it changes its state of matter. Water can exist as a solid, a liquid, or a gas.

Water Turns to Solid and Back Again

When liquid water gets very cold, it cools down to 32 degrees Fahrenheit. At this low temperature, liquid water turns into solid ice. This process is called freezing. If you leave a tray of liquid water in a freezer, it will freeze into hard ice cubes. However, when solid ice is warmed up, it begins to turn back into liquid water. This process is called melting. For example, an ice cube left out on a warm summer afternoon will melt into a puddle of water because heat is added.



The 3 states of water

Water Turns to Gas and Back Again

Temperature changes can also turn liquid water into a gas. When water warms up, it turns into an invisible gas called water vapor. This process is called evaporation. You can see evaporation happen when a puddle on the sidewalk dries up on a sunny day. The heat from the sun warms the liquid water and turns it into water vapor that rises into the air.

When invisible water vapor in the air cools down, it turns back into tiny drops of liquid water. This process is called condensation. You can observe condensation on a hot day when water droplets form on the outside of a cold glass of lemonade. The cold glass cools the warm air around it, causing the water vapor in the air to condense into liquid droplets on the glass. Condensation is also how clouds form in the sky when warm water vapor rises high into the cool atmosphere.

Heat Controls the Changes

Temperature is the key factor that controls how water changes forms. Adding heat causes solid ice to melt into liquid water, and further heating causes liquid water to evaporate into gas. Removing heat (cooling) causes water vapor to condense into liquid water, and further cooling causes liquid water to freeze into solid ice. Water constantly changes back and forth between solid, liquid, and gas as temperature goes up and down.

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1. What is the main idea of the section titled "Water Turns to Gas and Back Again"?

A. Water vapor is an invisible gas found high in clouds.

B. Liquid water changes into a gas when heated and back to a liquid when cooled.

C. Cold glasses of lemonade create liquid droplets on sunny summer days.

D. Puddles on the sidewalk dry up quickly when temperature drops.

2. This question has two parts.

Part A

What causes water droplets to form on the outside of a cold glass of lemonade on a hot day?

A. Heat leaves the lemonade and flows through the glass.

B. Liquid water leaks through the sides of the glass container.

C. Water vapor in the warm air cools down when it touches the cold glass.

D. The glass melts because of high outdoor temperatures.

Part B

Which sentence from the passage best supports the answer to Part A?

A. "However, when solid ice is warmed up, it begins to turn back into liquid water."

B. "The heat from the sun warms the liquid water and turns it into water vapor..."

C. "The cold glass cools the warm air around it, causing the water vapor in the air to condense into liquid droplets on the glass."

D. "Water constantly changes back and forth between solid, liquid, and gas..."

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