Puddle to Cloud

Trace water as it moves through land and air.

4.10 "Develop and use a model to describe how water moves through Earth's systems by the processes of evaporation, condensation, and precipitation."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the places water moves to, circle each change in water's form, and number evaporation, condensation, and precipitation in the order they happen. These marks will help you build a model of water's trip.

A Puddle's Trip

1. After a storm, rainwater fills a shallow puddle beside a school garden. By afternoon, the sun has warmed the puddle. Some liquid water changes into water vapor, a gas that rises into the air. This change is called evaporation. The water has not disappeared, even though the puddle gets smaller. It has moved from the ground into the air.

2. Higher in the sky, the air is cooler. Water vapor cools and changes into tiny drops of liquid water. This change is called condensation. Many tiny drops gather in clouds. Wind carries the clouds over a nearby hill. Some of the water that left the puddle may now be in cloud drops, but it can move again.

3. When cloud drops join and grow heavy enough, water falls as rain. This is precipitation. Rain lands on the hill, runs downhill into a stream, and flows past the garden. Other rain falls near the school and fills a new puddle. Some water also soaks into the soil. A model of this trip uses arrows to show where water moves and labels to show when water changes form.

2 ANSWER WITH EVIDENCE

Use the passage

1. In a model, draw an arrow from the puddle to the air. What process would you label on that arrow, and what form is the water in when it enters the air?

2. Your model shows water vapor becoming cloud drops. What process should you label there, and what form is the water in the drops?

3. How could arrows in your model show water moving from a cloud to the stream? Name the process that moves water from the cloud to the hill.

4. Why should a model show water moving into the air when the puddle gets smaller, rather than showing the water ending at the puddle?

3 YOUR TURN

Your own words

Draw your own model showing how water on a wet playground slide could move through the air and return to land. Use arrows to show its path, label evaporation, condensation, and precipitation, and name the form of water on the slide, in the air, and in a cloud.

ANSWER KEY

Puddle to Cloud

GRADE 4 · 4.10

PART 1 · READ AND MARK

Underline the places water moves to, circle each change in water's form, and number evaporation, condensation, and precipitation in the order they happen. These marks will help you build a model of water's trip. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	In a model, draw an arrow from the puddle to the air. What process would you label on that arrow, and what form is the water in when it enters the air?	**Label the arrow evaporation. The water enters the air as water vapor, a gas.**
2	Your model shows water vapor becoming cloud drops. What process should you label there, and what form is the water in the drops?	**Label the change condensation. Cloud drops are liquid water.**
3	How could arrows in your model show water moving from a cloud to the stream? Name the process that moves water from the cloud to the hill.	**Show rain falling from the cloud to the hill, then water running downhill into the stream. The rain is precipitation.**
4	Why should a model show water moving into the air when the puddle gets smaller, rather than showing the water ending at the puddle?	**The water has not disappeared. Some of it evaporates and moves into the air as water vapor.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Liquid water on wet slide → evaporation → water vapor in air → condensation → tiny liquid drops in cloud → precipitation → rain on land.

Accept different places where rain lands if arrows show a possible path back to land. The model should show water vapor as a gas, cloud drops as liquid water, and all three processes in a sensible order.