

Model the Water

Use a model to show how water changes and moves.

3.1.e.i “developing and using models use models to demonstrate simple phenomena and natural processes”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the names of the model parts. Circle the words that tell what each part represents or shows in nature.

A Tiny Water-Cycle Model

- ① Scientists use models to study things that are too large, too far away, or too slow to watch easily. A model is not the real thing. It is a smaller or simpler version that shows an important idea. A water-cycle model can help show how water changes and moves in nature after the Sun warms it.
- ② To make one model, a class puts colored water in a clear cup. They stretch clear plastic wrap over the cup and place a few ice cubes on top. Then they shine a lamp near the cup. The lamp represents the warming Sun. The water, plastic wrap, and ice help show different parts of the water cycle.
- ③ As the water warms, some of it changes into water vapor. Water vapor is a gas that cannot be seen. Near the cold plastic wrap, the vapor cools and forms tiny drops of liquid water. The drops show condensation. This model does not make real clouds or rain, but it helps students see water change from liquid to gas and back to liquid.

2 ANSWER WITH EVIDENCE Use the passage

1 What does the lamp represent in the model?

2 What happens to some of the water when it warms?

3 What do the tiny drops near the cold plastic wrap show?

4 Name one way this model is different from the real water cycle.

3 YOUR TURN Your own words

Draw a two-panel model plan that shows rain moving soil downhill. In Panel 1, show the setup. In Panel 2, show what happens after water is added. Label at least three parts, then write one sentence telling what one model part represents in nature.



PART 1 • READ AND MARK

Underline the names of the model parts. Circle the words that tell what each part represents or shows in nature. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What does the lamp represent in the model?	The lamp represents the warming Sun.
2	What happens to some of the water when it warms?	Some water changes into water vapor, a gas.
3	What do the tiny drops near the cold plastic wrap show?	They show condensation, when water vapor cools and forms liquid water drops.
4	Name one way this model is different from the real water cycle.	It does not make real clouds or rain. Accept another accurate difference stated in the passage, such as that it is smaller or simpler than the real water cycle.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Panel 1: A tilted tray holds soil. A spray bottle is above the soil, and a cup is at the low end. Labels: soil, tilted tray, spray bottle, cup. Panel 2: Water carries some soil down the tray into the cup. The spray bottle represents rain falling on land.

Accept answers that correctly connect model materials or actions to the natural process. For the open task, look for a before-and-after model, at least three labels, and an accurate explanation of one part's real-world meaning.