

Water Watchers

Predict, observe, and record changes caused by heating and cooling.

3.6.C “predict, observe, and record changes in the state of matter caused by heating or cooling in a variety of substances such as ice becoming liquid water, condensation forming on the outside of a glass...”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the three sentences that tell a prediction. Circle the three sentences with the words “the class observed” to separate what the class thought would happen from what it saw happen.

Three Water Tests

- ① On a cool day, Ms. Lee’s class investigated water in three states. First, a team put two ice cubes on a tray. Their prediction was, “The ice will get warmer and change from a solid to a liquid.” The class wrote this prediction in a science notebook. After ten minutes, the class observed a puddle around the smaller ice cubes. They recorded this observation.
- ② Next, students filled a dry glass with ice water. Their prediction was, “Water drops will form on the outside.” After a few minutes, the class observed drops on the outside. The drops came from water vapor in the air cooling on the cold glass and changing to liquid water. They recorded this observation right beside the prediction.
- ③ Then Ms. Lee heated a pan of liquid water until bubbles rose, while students watched from a safe distance. Their prediction was, “Heating will change some liquid water into water vapor, a gas.” The class observed bubbles rising. Later, they saw less liquid water in the pan. Some of the liquid had become invisible water vapor and mixed with the air. They recorded these observations in their notebooks.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What did the class predict would happen to the ice cubes? What did they observe after ten minutes?

2 What caused drops to form on the outside of the cold glass? Name the state change.

3 When the liquid water was heated, what did some of it become? What state was it in?

4 How did the class record its work before and after the tests?

3 YOUR TURN _____ Your own words

With an adult, choose two safe tests, such as warming an ice cube, using a cold glass of ice water, or warming a small piece of chocolate. Before each test, record a prediction. After each test, record what you observed and name the state change.

TEST	PREDICTION	WHAT I OBSERVED	STATE CHANGE

PART 1 • READ AND MARK

Underline the three sentences that tell a prediction. Circle the three sentences with the words “the class observed” to separate what the class thought would happen from what it saw happen. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What did the class predict would happen to the ice cubes? What did they observe after ten minutes?	They predicted the ice would get warmer and change from a solid to a liquid. They observed a puddle around the smaller ice cubes.
2	What caused drops to form on the outside of the cold glass? Name the state change.	Water vapor in the air cooled on the cold glass and changed to liquid water. The state change was gas to liquid.
3	When the liquid water was heated, what did some of it become? What state was it in?	Some liquid water became water vapor. Water vapor is a gas.
4	How did the class record its work before and after the tests?	They wrote predictions in a science notebook before testing. They recorded observations in the notebook after observing the changes.

PART 3 • YOUR TURN (SAMPLE ANSWER)

TEST	PREDICTION	WHAT I OBSERVED	STATE CHANGE
Ice cube on a plate	I predict it will melt into liquid water.	After 10 minutes, a puddle formed around the smaller cube.	solid to liquid
Cold glass of ice water	I predict drops will form outside.	Drops formed on the outside of the glass.	gas to liquid

Accept reasonable, safe adult-supported tests and observations. Each row should include a prediction made before the test, an observation made after it, and a correct state change.