The Day Water Changed Its Mind

A story about matter and its states



Riya and Ethan loved science days, especially when Ms. Gomez placed strange things on the front table. One morning, they saw a bowl of ice cubes, a pot of warm water on a hot plate, and a tray inside a small freezer box. 'Today,' Ms. Gomez said, 'we are going to watch matter change states.'

Topic: Matter and Its States

Science Fables

Solid, Liquid, and Gas



Ms. Gomez explained that matter can be a solid, a liquid, or a gas.
Ice is a solid because it keeps its shape.
Water is a liquid because it flows and fits its container.
Steam is a gas because it spreads out into the air.
"Today," said Ms. Gomez, "we will watch water change from one state to another."

Topic: Matter and Its States

Science Fables

When Ice Begins to Melt



Slowly, the edges of the ice cubes turned shiny.
Tiny drops of water slid down the sides.
“This change is called melting,” said Ms. Gomez.
“Melting happens when a solid gains heat energy and becomes a liquid.”

The melting point of water is 0°C, or 32°F.
While the ice is melting, the temperature stays constant until all the ice has changed into liquid water.

Science Element: Melting and melting point

Science Fables

The Pot Began to Bubble



Next, the class watched the pot on the hot plate. Tiny bubbles formed at the bottom. Soon they rushed to the surface, and steam drifted into the air.

'This is boiling,' Ms. Gomez explained. 'Boiling happens when a liquid changes into a gas.'

The boiling point of water is 100°C, or 212°F, at sea level. During boiling, the temperature also stays constant until the water finishes changing into gas.

Science Element: Boiling and boiling point

Science Fables

Water Turns Back to Ice



Then Ms. Gomez showed the class a cup that had been left in the freezer box. Yesterday it had been liquid water. Now it was solid ice.

'That change is called freezing,' said Riya.

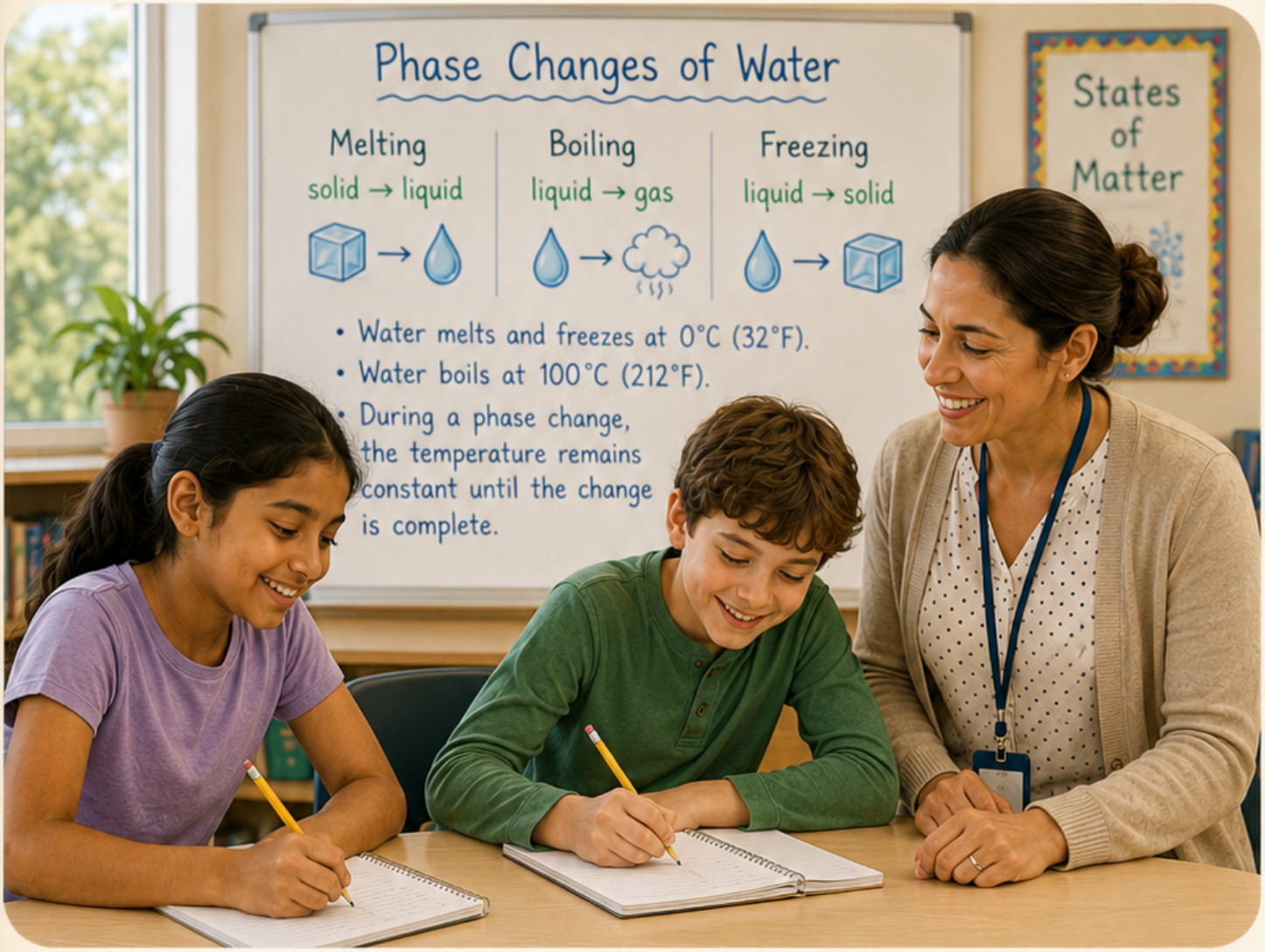
'Exactly,' said Ms. Gomez. 'Freezing happens when a liquid loses heat energy and becomes a solid.'

The freezing point of water is 0°C, or 32°F, and during freezing the temperature stays constant until the change is complete.

Science Element: Freezing and freezing point

Science Fables

The Big Idea About Phase Changes



At the end of class, Riya and Ethan wrote down the big idea:
Melting changes a solid to a liquid.
Freezing changes a liquid to a solid.
Boiling changes a liquid to a gas.
Water melts and freezes at 0°C (32°F), and it boils at 100°C (212°F).
Most important of all, during a phase change, the temperature remains constant until the change is complete.

Science Element: Matter can change state when it gains or loses energy.

Science Fables