

The Mystery of Heat and Temperature



Mina and Jay loved science days with Ms. Carter. One morning, they noticed something strange. The mug of cocoa felt warm, the ice felt cold, and the thermometer numbers kept changing. "What is heat?" Mina asked. "And is heat the same thing as temperature?" Jay wondered. Ms. Carter smiled. "Today," she said, "we are going to solve that mystery."

Feeling Warm, Feeling Cold



Ms. Carter handed Mina one thermometer and Jay another. They checked the mug of cocoa and the bowl of ice.

The numbers were very different.

“Temperature tells us how hot or cold something is,” Ms. Carter explained.

“It does not move from place to place.

It is a measurement.”

Mina nodded. “So temperature is like a number clue.”

What Is Heat?



Then Ms. Carter asked, “What happens when something warm touches something cooler?”

Jay watched the warm mug closely.

“Heat is energy that moves from a warmer object to a cooler one,”

Ms. Carter said.

“It travels until things become more equal.”

“Oh!” Mina said. “So heat moves, but temperature is what we measure.”

Ms. Carter smiled. “Exactly.”

Heat and Temperature Are Different



Ms. Carter drew a simple comparison.

“A tiny cup can have a higher temperature than a big tub of warm water,” she said.

“But the tub may contain more total heat energy because it has much more water.”

Jay thought about that.

“Temperature tells how hot or cold something is,” he said.

“And heat is energy that can move from warmer things to cooler things.”

“You’ve got it,” said Ms. Carter.

When Heat Changes Things



Next, the class watched heat cause changes.

Ice cubes began to melt into liquid water.

Warm water gave off steam.

“When heat is added, matter can change,” Ms. Carter explained.

“That is why heat is so important in science and in everyday life.”

Mina grinned. “Heat can make things happen!”

Science Element



Heat is energy that moves from a warmer object to a cooler one. Temperature tells how hot or cold something is. They are connected, but they are not the same. Scientists use both ideas to understand weather, cooking, melting, boiling, and much more. Mina and Jay left class with a new idea in mind: The world is full of energy, and science helps us notice it.