

## Objective

By the end of this lesson, the student will be able to distinguish between chemical changes and physical changes, understand examples of each, and explain the differences in a fun and engaging way.

## Materials and Prep

- Paper
- Pencil or colored pencils
- Access to a computer or tablet for research (if possible)
- Simple household items for examples (ice, sugar, vinegar, baking soda, etc.)

Before the lesson, ensure the student understands basic definitions of chemical and physical changes. You can explain that physical changes do not create new substances, while chemical changes do.

## Activities

### • Activity 1: Change Detective

The student will look around their home and list examples of physical and chemical changes they can find. They can categorize them into two columns on their paper.

### • Activity 2: Draw It Out

The student will draw two pictures: one illustrating a physical change (like melting ice) and one illustrating a chemical change (like baking soda reacting with vinegar). They can add labels to explain what is happening in each drawing.

### • Activity 3: Experiment Time!

If safe materials are available, the student can conduct a simple experiment, like mixing vinegar and baking soda to observe a chemical change, or melting ice to observe a physical change. They will write down their observations.

## Talking Points

- "A physical change is when something changes its form or appearance, but it stays the same substance. Like when ice melts into water!"
- "A chemical change happens when a new substance is formed. For example, when you bake a cake, the ingredients change into something new!"
- "Can you think of a time when you saw something change? Was it a physical change or a chemical change?"
- "Remember, in a physical change, you can usually get the original substance back, like freezing and melting water. But in a chemical change, it's harder to go back!"
- "Let's be detectives and find examples of both types of changes around us. What can you find?"