

## ***Matter can change in many ways.***

Recall that the properties of a substance can be ***physically changed*** but still stay the same substance. For example, water can be frozen, melted, or boiled, and it will still be water. What other physical changes in matter do you remember?

Matter can also change in ways that result in the formation of new substances. A ***chemical change*** causes matter to form new substances.

**When a substance goes through a chemical change, a new substance with properties different from the original substance is formed.** You will learn to identify when a new substance has been formed by using evidence of a possible chemical change such as:

- A gas is produced
- A change in energy, such as a temperature change or producing light.
- Production of a precipitate
- A change in color

For each of the following changes, give the evidence that helps support that the change is a chemical change.

1. Bread is toasted.
2. A burning match produces smoke.
3. Vinegar is added to a glass of milk and a white solid forms.
4. Fireworks exploding in the sky in bright colors.

1. What happens to a substance during a chemical change?

A new substance is formed

2. Is the new substance different from the original substance?

Yes

3. What are some signs of a chemical change?

- A gas is produced
- A change in energy, such as a temperature change or producing light.
- Production of a precipitate
- A change in color