

The background of the slide features a collection of chemistry glassware, including several Erlenmeyer flasks and a graduated cylinder. The flasks contain liquids of various colors: yellow, orange, and blue. A glass dropper is positioned over one of the flasks. The entire scene is set against a light blue and white background with a subtle gradient.

# Matter

## Properties of Matter

# Physical and Chemical Properties

- **Physical property** → characteristic of a substance that can change without the substance's becoming a different substance.
- Typically include odor, color, volume, state (gas, liquid, solid), density, melting point, and boiling point.
  - Think of it this way, you can change the color of your hair, shape of your body, or your name, but you are still you!



# Physical and Chemical Properties

- **Chemical property** → characteristic that describes the ability of a substance to change to a different substance.
- Wood burning in a fireplace is a chemical change because it gives off heat and gases and leaves a residue of ashes (no longer wood!).
  - Other examples: steel rusting, food digesting, and plants growing.

# Physical and Chemical Properties

## Identifying Physical and Chemical Properties

Classify each of the following as a physical or a chemical property.

- a. Gallium metal melts in your hand.



**Physical Property**

**Why?**

When solid gallium melts, it forms liquid gallium.



# Physical and Chemical Properties

## Identifying Physical and Chemical Properties

Classify each of the following as a physical or a chemical property.

b. The pages in your book are white.



Physical Property  
Why?

Color is a physical property, it does not change the paper.

# Physical and Chemical Properties

## Identifying Physical and Chemical Properties

Classify each of the following as a physical or a chemical property.

- c. The copper sheets that form the “skin” of the Statue of Liberty have acquired a greenish coating over the years.

**Chemical Property**

**Why?**

Copper reacts with air to form a new substance that is green.





The background of the slide features a collection of laboratory glassware. There are five Erlenmeyer flasks of varying sizes. Two flasks on the left contain a yellow liquid, one in the foreground and one slightly behind it. A central flask contains an orange liquid. To the right, two flasks contain a blue liquid. A glass dropper with a bulb is positioned in the center, partially submerged in the orange liquid. The entire scene is set against a light blue, slightly textured background.

# **The End!**