

# CHANGES IN MATTER

A decorative horizontal bar at the bottom of the slide, consisting of an orange rectangular segment on the left and a larger light blue rectangular segment on the right.

# Physical Change

- **NO NEW SUBSTANCE IS FORMED!**
- Alters only the form or state of a substance (freezing, breaking, melting).
- The chemical composition remains the same.
- It is *usually* reversible.

# Types of Physical Change

## □ Types of Physical Change

## Examples:

□ Change of State

Ice Melting

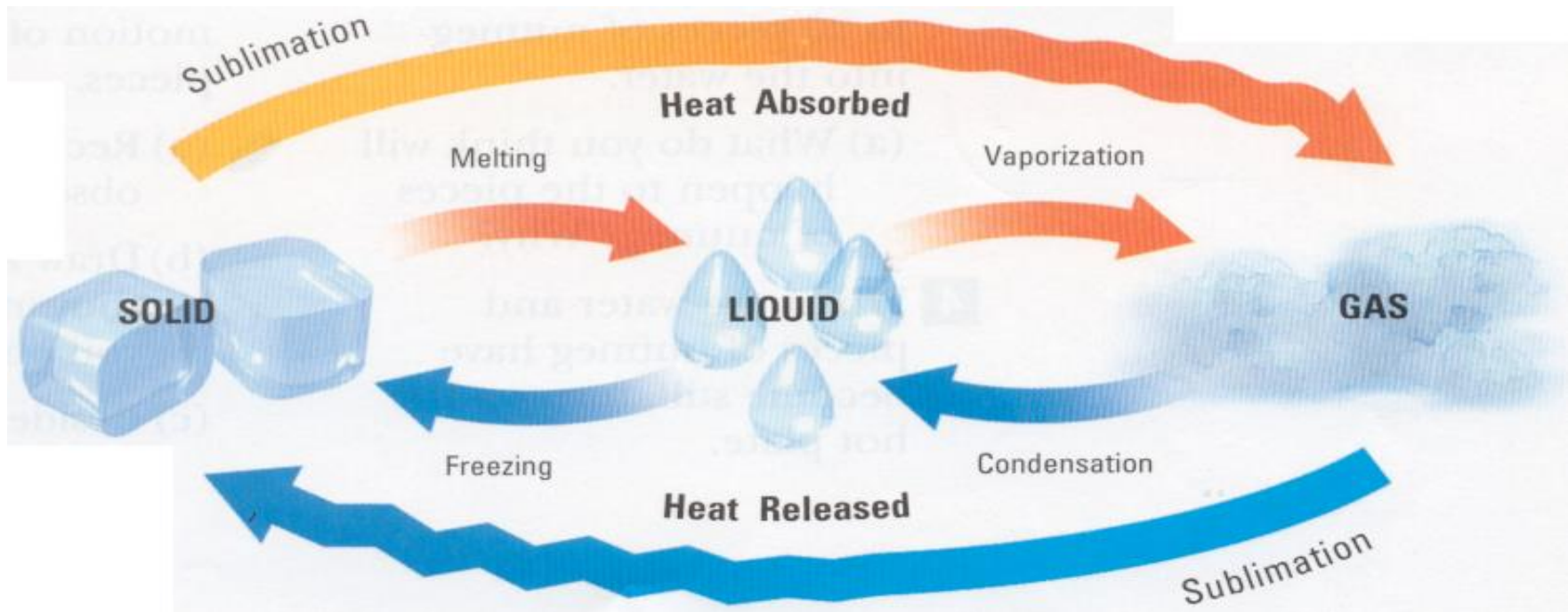
□ Dissolving

Mixing sugar in tea

□ Change of Form

Chopping Wood

# Changes in State



# Chemical Change

- **NEW SUBSTANCE IS FORMED!**
- Different chemical formula.
- Product has different physical & chemical properties
- Not usually reversible
- Chemical changes are the result of chemical reactions.

Reactants → Products

# Examples of a Chemical Change

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- Cooking an egg
- A car rusting
- Burning wood
- Digesting food to produce energy

# Evidence of Chemical Change

## ➤ “Rule of Thumb”

If you have **2 or more** of the following observations you probably have a chemical change



# Evidence of a chemical change

- A permanent change in colour.
- Bubbles of gas are produced.
- Two solutions mix to form a solid called a precipitate.
- Energy in the form of heat or light is released or absorbed.
- Electricity is produced.
- The change is not easily reversed.





# Videos

- Characteristics of a Physical Change Video:
  - <https://www.youtube.com/watch?v=w4UjfZqo1M0>
- Chemical Change and Baking Video:
  - [https://www.youtube.com/watch?v=37pir0ej\\_SE](https://www.youtube.com/watch?v=37pir0ej_SE)