

# PHYSICAL AND CHEMICAL CHANGES

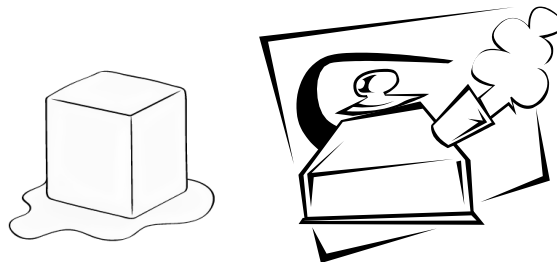
Matter can change in two ways – either **physically** or **chemically**.

## PHYSICAL CHANGES

A physical change is a change in which no new substances are formed. Physical changes usually involve a change in the size or shape of the matter.

Examples of some common physical changes include:

- tearing, breaking or grinding matter.
- causing a substance to change its state – ie., causing water turning into steam or ice.
- dissolving salt or sugar in water.



## CHEMICAL CHANGES

A chemical change (chemical reactions) is a change in which one or more new substances (with new chemical properties) are formed.

Examples of some common chemical changes include:

- rusting of iron
- souring of milk
- decomposition of food
- burning of wood

Chemical changes involve energy changes. Every chemical reaction involves some sort of energy such as light, heat or electrical energy.

For example, when you burn a candle, stored chemical energy in the wax turns into light and heat energy.

In another example, when you expose oxygen to iron, they combine to form a new substance called iron oxide (rust). Nails made of iron that are exposed to air will rust.

