

Physical and Chemical Changes

- Changes can broadly be classified into two types – physical and chemical.
- The characteristics of physical and chemical changes

Physical Change	Chemical Change
1. The chemical composition of a substance does not change. 2. Most changes are reversible. 3. No new substances are formed. For example, Ice → Water → Steam	1. The chemical composition of a substance changes. 2. Most changes are irreversible. 3. New substances are formed. For example, Paper → Ashes

- Burning a candle is a combination of physical and chemical change.

- **Rusting**

- Rusting is an example of chemical change.
- Presence of both air and water is essential for rusting to take place.
- Rusting can be prevented by cutting the contact of either air or water or both with iron. The same can be done by greasing, oiling, painting, and galvanizing iron (the process of depositing a layer of zinc on iron is called galvanization).
- Rusting can also be checked by alloying iron with other elements. Stainless steel is an alloy of iron with carbon, chromium, nickel, and manganese.

- **Crystallization**

- Crystallization is an example of physical change. The process of crystallization is used for purification of some substances.