

NCERT Class 7 Science Chapter 6 Physical and Chemical Changes Notes

Physical Change

A change in which no new substance is formed and which can generally be reversed by reversing the conditions is called a physical change.

Here, only physical properties like shape, size, color and state of a substance is change.

Eg: Melting of ice

Now let us discuss term under physical reaction which is important from examination point of view-->

- **Crystallization:** Crystallization is the process of removing salts from their solution. It is a method of purification that isolates crystals from impure materials or cleans saltwater. It is considered under physical change.

Chemical Change

A change in which one or more new substances are formed and which cannot be reversed by reversing the conditions is called a chemical change. A chemical change is also called a chemical reaction.

Now let us discuss some terms under chemical reaction which are important from examination point of view-->

- **Rusting:** When something is said to be rusting, it means that it has formed rust on the surface of an iron object or structure. Rust is a compound formed from a reaction between iron and oxygen along with presence of water.
Rusting accelerates if the air has a high moisture content, or if it is more humid.
Rusting weakens, flakes and degrades the strength, appearance, and permeability of iron.
This process can be represented by the following equation:
$$\text{Iron (Fe) + Oxygen (O}_2\text{) (From air) + Water (H}_2\text{O) } \rightarrow \text{ Rust (Iron oxide, Fe}_2\text{O}_3\text{)}$$
- **Galvanization:** Rusting can be prevented if the iron surface is blocked from contacting oxygen or water or both. A protective zinc coating is applied to iron or steel, to prevent rusting. This process is called galvanization.

Some other key terms

- **Sublimation:** Phenomenon in which solids directly convert into vapors on being heated. Eg: Camphor (Also known as kapoor)
- **Melting:** Phenomenon in which solid converts into liquid on being heated. Eg: Ice
- **Freezing:** Phenomenon in which liquid converts into solid on being cooled. Eg: Water
- **Vaporization:** Phenomenon in which liquid converts into gas on being heated. Eg: Water
- **Condensation:** Phenomenon in which gas converts into liquid on being cooled. Eg: Water vapor

