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## CHAPTER – 6

### Changes Around Us

- Some changes can be reversed and some cannot be reversed.
  - A change may occur by heating a substance or by mixing it with some other.
  - Types of changes:
    - (a) **Reversible change:** A change in which the initial substance can be obtained back by reversing the action. Example: folding of paper, dissolving sugar in water, etc.
    - (b) **Non-irreversible change:** Change in which the initial substance cannot be obtained back by reversing the action. Example: burning of paper, grinding grains etc.
    - (c) **Physical change:** Changes in the form of substance but not in chemical identity. No new substance formed. Change is sometimes reversible. Example: breaking a log of wood.
    - (d) **Chemical changes:** Changes in which substance is transformed into new substance. Initial substance is lost. Change is always irreversible. Example: burning a log of wood.
  - Ways by which changes occur:
    - (a) **Boiling and Condensation:**
      - (i) **Boiling:** The rapid vaporization of a liquid when it is heated to its boiling point.
      - (ii) **Condensation:** The change of water vapor into liquid water on cooling.
    - (b) **Heating of metal:** Process in which a **metal** is **heated** to a certain temperature and then cooled in a particular manner to alter its internal structure for obtaining desired degree of physical and mechanical properties such as brittleness, hardness, and softness.
    - (c) **Freezing and Melting:**
      - (i) **Freezing:** The process in which a liquid turns into solid when its temperature is lowered.
      - (ii) **Melting:** The process in which a solid converts to a liquid by applying heat.
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