Introduction

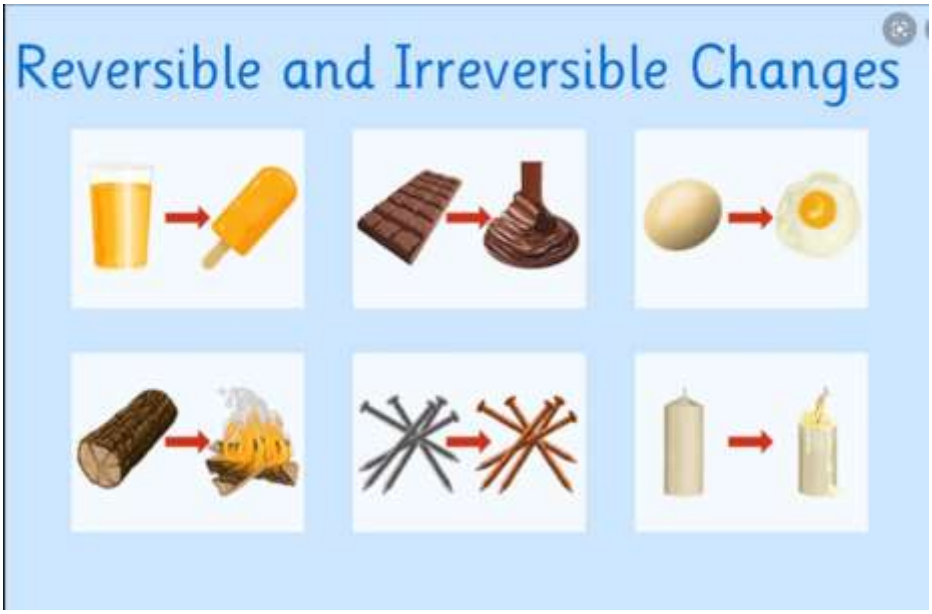
- We notice many changes taking place around us on their own.
- For instance, flowers bloom and wither with time, crop changes from time to time. Changes takes place in our body also like increase in height and weight etc.

Change

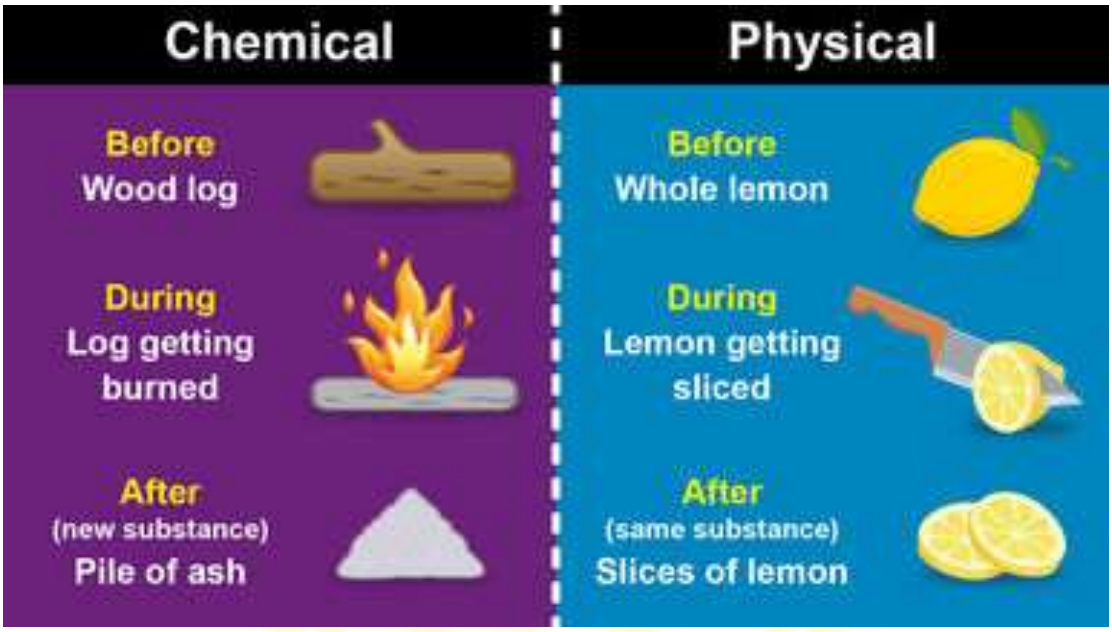
- When one or more properties of a substance become different or something new is formed, it is known as a change.
- For example, burning of fireworks, formation of curd, ripening of fruits, drying of clothes.

Types of changes

- Changes can be natural or man-made.
- **Natural changes** – falling of leaves, change in weather, germination of seeds etc.
- **Man-made changes** – burning of fuels, making of curd, rolling of chapati etc.
- A substance can undergo a change only in presence of certain agents such as heat, electricity, light, force etc.
- Changes can be of other types:
- **Reversible change** – A change that can be reversed to its original state is called a reversible change. For example, stretching of a rubber band, change of ice to water and water to vapours, drying of clothes, melting of ice-cream.
- **Irreversible change** – A change that cannot be reversed to its original state and is permanent is called a reversible change. For example, burning of paper, cooking of food, souring of milk, ripening of fruits.



- **Physical change** – change brought about in the physical property of a substance is called Physical change. The molecular composition remains same and no new substance is formed. Example: melting of ice, stretching of a rubber band etc.
- **Chemical change**- change that produces new substances with different chemical properties is called a chemical change. The molecular composition changes. Example: ripening of fruit, boiling of an egg etc.



Expansion and Contraction

- When the temperature is increased the particles of a substance expands. The phenomenon is called expansion.
- When the temperature is decreased the particles of a substance contract. The phenomenon is called contraction.
- The extent of expansion and contraction varies in solids, liquids and gases.
- When a substance changes from one state to another, physical changes take place.
- The best example is water because it can exist in all three forms.
- At very low temperatures water exists as solid called ice. When temperature is increased the ice starts melting and converts to liquid state. This process is called melting.
- When temperature is further increased water starts boiling and slowly gets converted to water vapour. This process is called evaporation.
- The water vapours are condensed to get back liquid water. This process is called condensation.