



Changes in Our Surroundings

The process by which something becomes different to what it is at present or was in the past is called a **change**.

e.g. Different shape and sizes of moon, growth of trees, burning of paper, etc.

Changes are of two types

1. Physical changes
2. Chemical changes

Physical Changes

Changes in which physical properties like shape, size and state of a substance alter without the formation of a new substance are called physical changes. It is a reversible process.

- e.g.
- Tearing a sheet of paper
 - Grinding of substances
 - Preparing solution of salts and sugar in water
 - Change of seasons
 - Shape on blowing air
 - Stretching of a rubber band
 - Water changes into ice on cooling

Chemical Changes

A chemical change is a transformation occurs in the substance. It alters the chemical properties. It is an irreversible process.

- e.g.
- Burning of paper
 - Formation of curd

- Cooking of food
- Iron changes to rust
- Burning of incense stick
- Burning of wood
- Frying of egg

Difference between Physical and Chemical Change

S.N.	Physical Change	Chemical Change
1.	Physical change effect only physical properties of the substance.	Chemical changes effect both physical and chemical properties.
2.	Physical changes are easy to reverse, e.g. reversible	Chemical changes is irreversible.
3.	It is usually temporary.	It is usually permanent.

Some other examples of physical changes

Expansion A phenomenon in which the shape or size of a substance increases is called expansion.

Contraction A phenomenon in which the substance shrinks of its shape or size decreases is called contraction.

- e.g. For fixing the metal rim on a wooden wheel of a cart, a metal rim smaller than the size of wheel is used. Thereby on heating, the rim expands and gets fitted to the wheel and on pouring cold water over the rim, it contracts and finally fits tightly to the wheel.



Practice Exercise

1. Pick the change that can be reversed from the following.
(a) Cutting of trees (b) Melting of ghee
(c) Burning of candle (d) Blooming of flower
2. Which of the following changes cannot be reversed?
(a) Hardening of cement
(b) Freezing of ice cream
(c) Opening a door
(d) Melting of chocolate
3. 'Tearing a sheet of paper' is
(a) Physical change
(b) Chemical change
(c) Irreversible process
(d) None of the above
4. Which one of the steps while burning a candle is not reversible?
(a) Melting of solid wax
(b) Wax vapour burn into flame
(c) Liquid wax changes into vapours
(d) All of the above
5. Which is one(s) is/are a way to make a change happen?
(a) Heating of substance
(b) Mixing of substance with another substance
(c) Cooling of substance
(d) All of the above
6. Rusting of iron is an example of
(a) chemical change
(b) physical change
(c) reversible change
(d) All of the above
7. Burning of paper is a change.
(a) physical
(b) chemical
(c) reversible
(d) None of the above
8. Which of the following is a chemical change?
(a) Twinkling of stars
(b) Cooking of vegetables
(c) Cutting of fruits
(d) Boiling of water
9. A chemical change may involve
(a) change in colour only
(b) change in temperature only
(c) change in size and shape only
(d) All of the above
10. Which of the following is correct when milk change into curd?
(a) It changes from liquid to solid
(b) It changes taste
(c) The change cannot be reversed
(d) All of the above

Answers

1	(b)	2	(a)	3	(a)	4	(b)	5	(d)	6	(a)	7	(b)	8	(b)	9	(d)	10	(d)
---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	---	-----	----	-----