

Changes Around Us

Exercise 47:

Solution 1(a):

The changes which are brought about nature itself are called natural changes. These changes are beyond the control of man.

Example: Change of season, Tides in the sea, Ageing of plants, Landslides etc.

Solution 1(b):

The changes which are brought about by man are called man-made changes. These changes are under the control of man.

Example: Formation of curd, Burning of fuels, Cutting nails, Switching on an electric fan etc.

Exercise 48:

Solution 1(a):

Examples of reversible changes are as follows:

1. Melting of ice
2. Pulling of rubber band
3. Folding of paper
4. Evaporation of water

Solution 1(a):

Examples of non-reversible changes are as follows:

1. Burning of a matchstick
2. Germination of seed
3. Rusting of iron
4. Burning of fire crackers

Solution 1(c):

Changes in which physical properties like shape, size and state change without formation of a new substance are called Physical changes.

Examples: Melting of wax, Boiling of water, Expansion of iron on heating etc.

Exercise 49:

Solution 1(a):

The changes which take place in a long period of time are called slow changes.

Example:

1. Baking a chapatti
2. Burning of paper
3. Burning of wood.

The changes which take place in a short period of time are called fast changes.

Example:

1. Burning a matchstick
2. Burning of magnesium ribbon
3. Evaporation of petrol

Solution 1(a):

Changes brought about by a person or the nature, which are harmful, are known as non-agreeable changes.

Example:

1. Souring of milk
2. Rusting of iron
3. Spoiling of food
4. Flooding of rivers

Solution 1(c):

Changes which are desired to occur that is we want them to take place are known as desirable changes.

Example:

1. Germination of seeds
2. Raining
3. Growth of a child
4. Healing of a wound

Exercise 50:

Solution 1(a):

Periodic changes are as follows:

Day and night

Heartbeat

Phases of the moon

Solution 1(a):

Changes that do not repeat themselves at regular intervals of time are called non-periodic changes.

Examples:

1. Cyclone
2. Earthquake

Solution 1(c):

1. Movement of spring: Reversible change
2. Germination of a broad bean: Non-reversible change
3. Growth of human being: Slow change

Exercise 52:

Solution 1(a):

1. Calcium oxide (Quick lime) reacts with water to form calcium hydroxide, also called slaked lime.
$$\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$$

A lot of heat is produced in the reaction. Due to this, sometimes water boils.
2. When common salt is added to water, it forms a salt solution.

Exercise 53:

Solution 1(a):

1. Blowing of wind: Natural, Desirable, Non-periodic
2. Ebb-tide: Natural, Periodic
3. Formation of curd from milk: Non-reversible, Desirable
4. Rainfall: Natural, Desirable
5. Heating of wax: Physical, Reversible
6. Pressing a rubber ball: Physical, Reversible
7. Preparing organic manure: Man-made, Non-reversible
8. Frying puris: Man-made, Non-reversible, Desirable
9. Ripening of mangoes: Desirable, Non-reversible, Slow
10. Contamination of food: Non-agreeable