

CHANGES IN THE ENVIRONMENT

Change

- This is the process of something becoming different.

Types of changes in the environment

- Biological changes
- Physical changes
- Chemical changes
- Natural changes
- Atmospheric changes
- People made changes

Biological changes

- These are changes that take place in living things.

Examples of biological changes in plants

- Photosynthesis
- Germination
- Flowering
- Shedding leaves
- Pollination
- Growth
- Fertilization
- Tropism

Examples of biological changes in animals

- Moulting
- Sweating
- Growth
- Menstruation
- Fertilization
- Reproduction
- Hatching of an egg
- Developments of breasts
- Change in the colour of a chameleon

Characteristics of biological changes

- They are irreversible
- They occur in living things

Biological change that occurs in both plants and animals

- Growth
- Reproduction

Importance of biological changes

- They lead to continuity of life.
- They help living things to increase in number.
- They help living things to increase in size.

Simple Task

1. Give any **two** examples of biological changes in plants.
2. Give any **two** characteristics of biological changes.
3. Mention any **two** biological changes common in plants and animals.

Chemical changes

- These are changes in which a new substance is formed.

Characteristics of Chemical changes

- They form a new substance
- They are irreversible
- Heat or light is given
- There is change in mass.

Examples of chemical changes

- | | |
|----------------------|------------------|
| ➤ Burning | ➤ Weathering |
| ➤ Rusting | ➤ Decomposition |
| ➤ Respiration | ➤ Fermentation |
| ➤ Digestion | ➤ Photosynthesis |
| ➤ Ripening of fruits | |

Chemical changes in living things

- Digestion
- Photosynthesis
- Respiration
- Ripening of fruits

How are chemical changes similar to biological changes?

- Both are irreversible

Importance of chemical changes

- Help in soil formation
- Help to reduce on wastes
- Help in production of alcohol

Disadvantages of chemical changes

- Make tools weak
- Destruction of property
- Some lead to air pollution

Simple Task

1. What are chemical changes?
2. Give any **two** characteristics of chemical changes.
3. Give any **two** chemical changes that occur in living things.
4. Give the similarity between chemical changes and biological changes.

Physical changes

- These are changes in which no new substance is formed.

Characteristics of physical changes

- The changes are reversible
- No new substance is formed
- No heat or light is given off
- There is change in mass

Examples of physical changes

- | | |
|----------------|----------------------|
| ➤ Melting | ➤ Sublimation |
| ➤ Freezing | ➤ Deposition |
| ➤ Evaporation | ➤ Breaking of an egg |
| ➤ Condensation | |

Physical changes that require heat

- Evaporation
- Melting

- Sublimation

Physical changes that occur as a result of fall in temperature

- Condensation
- Freezing

Dew

- Dew is water droplets that appear on vegetation at night and early morning
- Dew is formed by condensation of water vapour

Why is dew formed at night?

- Due to low temperature at night

Why does dew disappear during day?

- It is evaporated by high temperature

Importance of physical changes

- Help in rain formation
- Helps in melting metals to make new tools
- Help in formation of ice

Simple Task

1. What are physical changes?
2. Give any **two** characteristics of physical changes.
3. Give any **two** physical changes involved in water cycle.

Natural changes

- These are changes that occur on their own

Examples of natural changes

- Earthquakes
- Floods
- Drought
- Lightning
- Land slides
- Volcanic eruption

Dangers of natural changes

- Destruction of property
- Leads to death of animals

Atmospheric changes

- These are changes that occur in the atmosphere

Examples of atmospheric changes

- Movement of cloud
- Lightning and thunder
- Changes in weather

People made changes

- These are changes caused by people

Examples of People made changes

- Tree planting
- Building houses
- Clearing vegetation
- Road construction
- Industrialization

Positive effects of Changes in the environment

- Biological changes lead to continuity of life
- Physical changes lead to formation of rain
- Planting trees control soil erosion
- Planting of trees increase rain formation
- Some chemical changes help in soil formation
- Biological changes enable living things to reproduce
- Lead to improvement of animals by cross breeding

Negative effects of changes in the environment

- Some changes lead to environmental pollution
- Some chemical changes weaken iron tool e.g. rusting
- Natural disasters destroy property
- Natural disasters kill people
- Cutting trees causes drought

Simple Task

1. Give any **three** examples of natural changes.
2. State any **two** examples of people made changes.
3. Give ant **three** positive effects of changes in our environment.