



# Characteristics of Living and Non-living

## 1. Classification of Things

All things around us are classified into two groups:

- Living Things
- Non-living Things

## 2. Characteristics of Living Things

Living things show seven main characteristics:

### i. Move:

- Animals move from place to place using legs, wings, or other body parts.
- Plants move their parts (roots grow downward, shoots grow upward).
- Some movements are internal (e.g., food and water moving inside plants).

### ii. Need Food:

- Food gives energy for growth and health.
- Plants make their own food through photosynthesis.
- Animals depend on plants and other animals for food.

### iii. Breathe (Respire):

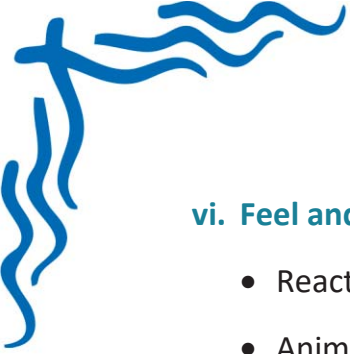
- Living things take in oxygen and give out carbon dioxide.
- Humans and animals: Breathe through nose or gills (fishes).
- **Plants:** Breathe through stomata in their leaves.

### iv. Excrete Waste:

- Removal of waste from the body.
- Humans and animals: Excrete urine, sweat, and carbon dioxide.
- **Plants:** Excrete oxygen, water, and substances like gums or resins.

### v. Grow and Develop:

- Living things grow from small to large over time.
- **Example:** Seeds → baby plants → trees.
- Humans grow from babies to adults.



#### vi. Feel and Respond:

- React to changes in the environment (light, heat, cold, touch, etc.).
- Animals: Use sensory organs (eyes, ears, skin, nose, tongue).
- Plants: Respond to touch and light (e.g., touch-me-not plant closes when touched).

#### vii. Reproduce:

- Living things produce more of their kind.
- Animals: Give birth or lay eggs.
- Plants: Grow from seeds, roots, stems, or leaves.

### 3. Characteristics of Non-living Things

Non-living things do not show the seven characteristics of living things.

- Do not need food, air, or water.
- Do not grow or develop.
- Do not move on their own.
- Do not feel or respond.
- Do not reproduce.
- Do not excrete waste.
- Do not die.

### 4. Two Types of Non-living Things

#### 1. Never Part of a Living Thing:

Examples: Stone, gold, sand, glass.

Do not show any characteristics of living things.

#### 2. Once Part of a Living Thing:

**Example:** Coal (formed from dead trees millions of years ago).

It was once part of a living thing but is now non-living.



## 5. Key Differences Between Living and Non-living Things

| Living Things                    | Non-living Things             |
|----------------------------------|-------------------------------|
| Move on their own                | Do not move by themselves     |
| Need food and water              | Do not need food or water     |
| Grow and develop                 | Do not grow                   |
| Reproduce                        | Do not reproduce              |
| Feel and respond to surroundings | Do not respond                |
| Excrete waste                    | Do not excrete                |
| Have a lifespan and die          | Do not have a lifespan or die |

## 6. Critical Thinking: Motor Car vs. Living Thing

### Similarities:

- Needs fuel (similar to food) for energy.
- Moves from one place to another.

### Differences:

A car does not grow, reproduce, feel, or excrete, so it is not a living thing.