



## Germination

### What is Germination?

Germination is the process by which a seed grows into a young plant (seedling).

For germination to occur, seeds need:

- Sunlight → Provides warmth.
- Water → Helps the seed swell and sprout.
- Air → Supplies oxygen for growth.
- Soil → Provides nutrients.

#### Process:

- The seed absorbs water and swells.
- The radicle (baby root) grows downward into the soil.
- The hypocotyl (stem part) grows upward.
- Tiny root hairs develop to absorb water and nutrients.
- The seedling grows into a new plant.

### Why Don't All Seeds Germinate?

- Not all seeds grow into plants because:
- Some are eaten by birds or insects.
- Some are destroyed by rain or wind.
- Some lack proper conditions (light, water, warmth).

#### Fun Facts:

Bamboo is the fastest-growing woody plant in the world – it can grow 35 inches in a single day!

One average-sized tree can provide enough wood to make 1,70,100 pencils!

Bananas contain a natural chemical that can make people feel happy.

The first potatoes were cultivated in Peru about 7,000 years ago.



**Tip for Students:**

**Germination** = Seed → Seedling → Plant

**Conditions needed** = Sunlight + Water + Air + Soil