

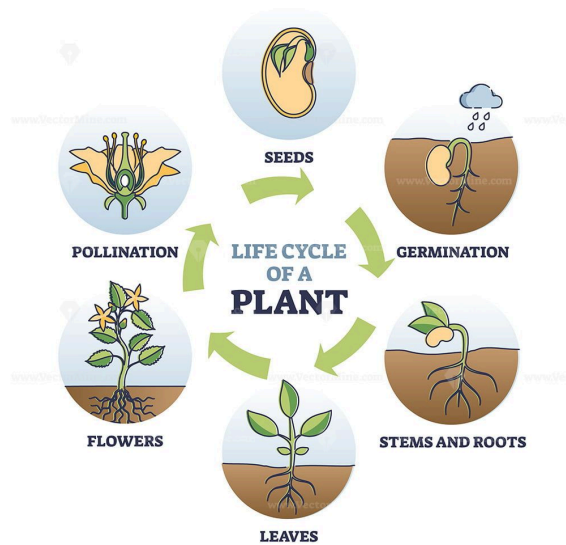
General Topic: Life Cycles of Plants and Animals

Lesson Overview:

Students explore the stages of **growth and development in plants and animals**, understanding how life begins, grows, reproduces, and ends.

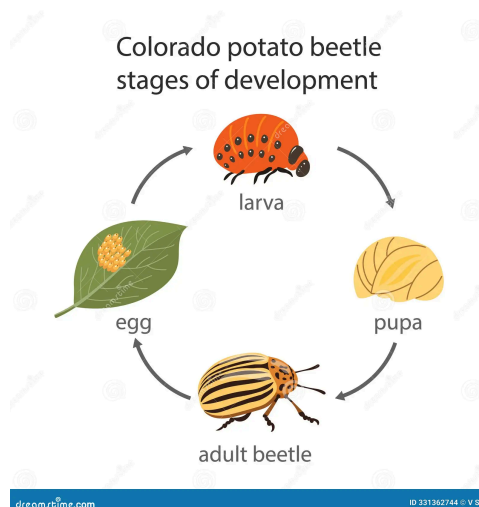
Key Concepts and Subtopics:

- Stages in the life cycle of plants (seed, germination, growth, reproduction)



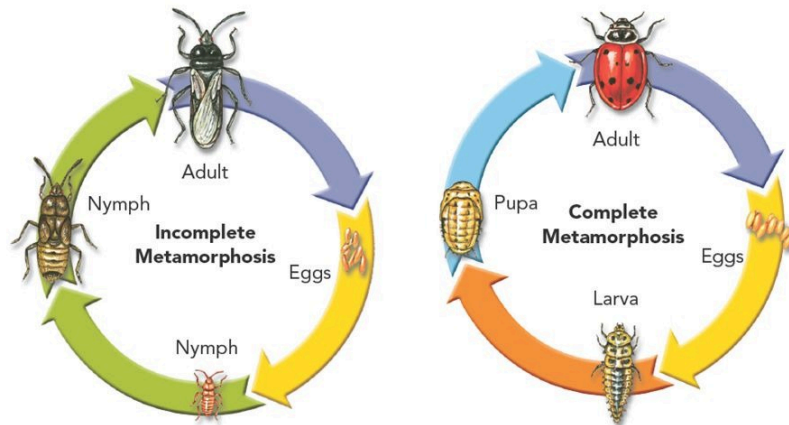
Reference: <https://www.pinterest.ie/pin/life-cycle-of-plant-with-seeds-growth-in-biological-labeled-outline-diagram-732538695650164852/>

- Life cycles of animals (egg, larva, pupa, adult for insects; egg to adult for birds, amphibians, reptiles)



- Metamorphosis and non-metamorphosis animals

Complete vs. Incomplete Metamorphosis



Reference: <https://animaldifferences.com/page/2/>

- The role of reproduction in species survival

What is Reproduction?

Reproduction is the process by which living things produce offspring (babies, young, or new plants).

Why is it Important?

- Ensures the **continuation of the species** (hindi mauubos).
- Passes on **traits** (katangian) from parents to offspring.
- Maintains the **balance in ecosystems** (more plants → more food for animals).

Types of Reproduction

1. **Asexual Reproduction** – only one parent, offspring are exact copies.
 - Example: Hydra budding 🐢, potato growing from tuber 🥔
2. **Sexual Reproduction** – involves two parents, offspring are unique.
 - Example: Humans 👨👩, dogs 🐕, flowering plants 🌸

Real-Life Example:

Observing a caterpillar turn into a butterfly.

Remember This!

- *Every living thing has a cycle that ensures its species continues.*



General Topic: Human Body Systems

Lesson Overview:



Introduces major systems of the **human body and their functions.**

Key Concepts and Subtopics:



- Circulatory system – heart and blood vessels

- **Main Parts:** Heart , blood, blood vessels
- **Function:** Carries oxygen and nutrients around the body, removes waste.
- **Analogy:** Like a **delivery system**  that brings supplies to every cell.




- Respiratory system – lungs and breathing

- **Main Parts:** Lungs , nose, trachea
- **Function:** Brings oxygen in and releases carbon dioxide.
- **Analogy:** Like **breathing balloons**  that fill and empty.



- Digestive system – breaking down food into nutrients

- **Main Parts:** Mouth , stomach, intestines
- **Function:** Breaks down food into nutrients for energy and growth.
- **Analogy:** Like a **food factory**  that turns food into fuel.

- Musculoskeletal system – muscles and bones for movement

- **Main Parts:** Muscles , bones , joints
- **Function:** Helps the body stand, move, and protect organs.
- **Analogy:** Like the **frame and engine** of a car .

- Nervous system – brain, spinal cord, nerves for control and coordination

- **Main Parts:** Brain , spinal cord, nerves
- **Function:** Controls body actions, thoughts, and senses.
- **Analogy:** Like a **computer**  sending messages through wires.

Real-Life Example:

Breathing faster after running because your body needs more oxygen.

Remember This!

- *Body systems work together—no system works alone.*

General Topic: Matter: Physical and Chemical Changes

Lesson Overview:

Explains the differences between **physical and chemical changes** in matter.

Key Concepts and Subtopics:

- Physical change – change in appearance but no new substance (melting ice, cutting paper)

- Change in **appearance only**
- **No new substance is formed**
- **Examples:**
 - Melting ice ❄️ → water 💧
 - Cutting paper ✂️
 - Breaking glass 🪄
- 💡 **Tip:** Can usually be reversed!

- Chemical change – new substances formed (rusting, burning, cooking)

- **New substance is formed**
- Can't easily go back to original form
- **Examples:**
 - Rusting of iron 🦷
 - Burning wood 🔥
 - Cooking an egg 🍳
- 💡 **Tip:** Usually permanent!

- Indicators of chemical change (color change, gas production, temperature change, odor)

1. **Color change** 🌈
2. **Gas production** 🫧 (bubbles/fizz)
3. **Temperature change** 🌡️ (hot or cold)
4. **New odor** 👃

Real-Life Example:

Boiling water (physical) vs. frying an egg (chemical).

Remember This!

- *If a new substance is made, it's a chemical change.*

General Topic: Earth Science: Natural Resources and Weather

Lesson Overview:

Covers **Earth's resources and weather patterns** that affect living things.

Key Concepts and Subtopics:

- Types of natural resources (renewable, nonrenewable)

• Renewable 🌞💧🌳
• Can be replaced naturally
• Examples: sunlight, wind, water, trees
• Nonrenewable ⚡🔥
• Limited supply, cannot be replaced quickly
• Examples: coal, oil, natural gas, minerals

- Importance of conserving water, soil, and minerals

• Water: for drinking, farming, electricity
• Soil: for growing food 🌱
• Minerals: for tools, buildings, technology 🏗️
👉 If wasted, these resources may run out!

- Weather elements (temperature, wind, rainfall)

1. Temperature 🌡️ (hot or cold)
2. Wind 🌀 (direction & speed)
3. Rainfall 🌧️ (amount of rain)

- Reading weather instruments and forecasts

Real-Life Example:

Saving water during a drought to conserve resources.

Remember This!

- *Our survival depends on how we care for Earth's resources.*

General Topic: Forces, Energy, and Simple Machines

Lesson Overview:

Introduces how **forces and energy** make work easier through **simple machines**.

Key Concepts and Subtopics:

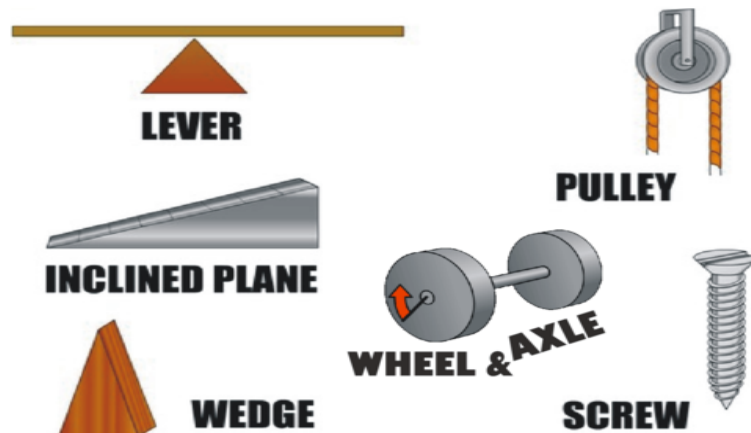
- Types of forces (push, pull, friction, gravity)

- **Push** 🖐️ moving something away
- **Pull** 🖐️ bringing something closer
- **Friction** 🖐️ force that slows down motion
- **Gravity** 🌍 pulls everything toward Earth

- Forms of energy (kinetic, potential, light, heat, sound)

- **Kinetic Energy** 🏃 moving objects
- **Potential Energy** 💡 stored energy (like stretched rubber band)
- **Light Energy** 💡 from the Sun or lamps
- **Heat Energy** 🔥 from fire, stove, or the Sun
- **Sound Energy** 🎵 from vibrations (music, voices)

- Simple machines (lever, pulley, inclined plane, screw, wedge, wheel and axle)



Reference: <https://quizlet.com/138869253/6th-gr-simple-machines-flash-cards/>

- How machines reduce effort

- Machines make work easier by:
 - Changing the **direction** of force (e.g., pulley)
 - Increasing **force** applied (e.g., lever)
 - Allowing objects to move with **less effort** (e.g., ramp)

Real-Life Example:

Using a pulley to lift a heavy bucket.

Remember This!

- *Machines don't reduce work—they make it easier to do.*

General Topic: Environment and Sustainability

Lesson Overview:

Teaches how to **protect the environment** and use resources wisely.

Key Concepts and Subtopics:

- Reduce, reuse, recycle



Reference: <https://www.pinterest.com.au/pin/521573200568184220/>

- Protecting biodiversity

- **Biodiversity** = variety of plants and animals in nature
- **Why important?**
 - Keeps balance in ecosystems 🌱
 - Provides food, medicine, clean air & water 🍎💊💧
- **How to protect?**
 - Plant trees 🌳
 - Avoid hunting endangered animals 🦋🐢
 - Protect forests and oceans 🌊

- Sustainable farming and fishing

- **Sustainable** = use resources wisely so they last
- Farming 🌾
 - Crop rotation (change crops each season)
 - Avoid too much pesticide
- Fishing 🐟
 - Catch only grown fish 🐟
 - Avoid using harmful nets or chemicals

- Effects of pollution and climate change

- **Pollution** = dirtying the land, water, or air 🚫🌫️
 - Smoke from factories 🏭
 - Trash in rivers and oceans 🗑️
- **Climate change** = Earth getting hotter 🌡️
 - Melting ice 🧊 → higher sea levels 🌊
 - Stronger typhoons and droughts 🌀☀️
- What can we do?
 - Reduce, Reuse, Recycle ♻️
 - Save electricity and water 💡💧
 - Walk, bike, or carpool 🚶🚲🚗

Real-Life Example:

Planting trees to improve air quality and reduce carbon dioxide.

Remember This!

- *A healthy environment means a healthy future.*