



Biosii

Engaging Question: How do plants grow and thrive?

Key Knowledge

Plant Life Cycle:

- **Germination:** The process by which a seed develops into a new plant.
- **Growth:** The development of roots, stems, and leaves.
- **Reproduction:** The production of flowers, fruits, and seeds.
- **Pollination:** The transfer of pollen from one flower to another, leading to fertilization.

Factors Affecting Plant Growth:

- **Light:** Essential for photosynthesis, the process by which plants make their food.
- **Water:** Necessary for nutrient transport and maintaining cell structure.
- **Soil:** Provides nutrients and support for the plant.
- **Temperature:** Affects the rate of growth and development.

Photosynthesis:

- **Process:** Plants use sunlight, carbon dioxide, and water to produce glucose (food) and oxygen.

Learning Activity

Objective: Understand the factors that affect plant growth and the process of photosynthesis.

Instructions:

- **Study** the life cycle of plants and the factors that affect their growth.
- **Identify** the stages of the plant life cycle and the role of photosynthesis.
- **Take notes** on how light, water, soil, and temperature influence plant growth.

Resources Needed:

- Internet access or library resources
- Notebook and pen

Challenge

Challenge Description: Conduct an experiment to grow plants under different conditions and document the results.

Instructions:

- **Choose** different conditions to test (e.g., varying light levels, water amounts, soil types).
- **Plant** seeds and monitor their growth under these conditions.
- **Document** the growth of the plants, noting any differences in development.

Submission Requirements:

- Experiment report
- Include a brief written explanation (1-2 paragraphs)

Helpful Tips

- Use a chart or graph to track the growth of your plants.
- Take photos to document the different stages of growth.
- Be consistent with your observations and measurements.