



Lowerhouse Junior School

Science Overview Sheet



Year 3 – Plants



Rationale: Teaching plants in Year 3 science is essential for fostering an understanding of biology and ecology. It helps students appreciate the role of plants in the environment, their life cycles, and their importance for human survival. Engaging activities like planting seeds and observing growth promote curiosity and hands-on learning.

Substantive Knowledge:

- Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant
- Investigate the way in which water is transported within plants
- Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Disciplinary Knowledge:

- Classifying
- Observing over time
- Pattern Seeking

Overview:

Lesson 1: What do plants need for life and growth?
Lesson 2: What are the parts of a plant and their functions.
Lesson 3: How is water transferred within plants?
Lesson 4: Why are flowers important in a plant's life cycle? (pollination)
Lesson 5: Why are flowers important in a plant's life cycle? (seed dispersal)
Lesson 6: What have we learned about plants?

Key Vocabulary:

Photosynthesis: The process by which plants use sunlight to convert carbon dioxide and water into glucose and oxygen, providing energy for growth.
Pollen: Fine powdery substance consisting of microscopic grains discharged from the male part of a flower or from a male cone, essential for fertilization.
Insect/Wind Pollination: The transfer of pollen from one flower to another by insects or wind, facilitating plant reproduction.
Male: The part of the plant that produces pollen, typically the stamen.
Female: The part of the plant that receives pollen and produces seeds, typically the pistil.
Seed Formation: The process by which fertilized ovules develop into seeds.
Seed Dispersal: The methods by which seeds are spread from the parent plant to new locations. This includes:
Air: The mixture of gases surrounding the Earth, essential for plant respiration and photosynthesis.
Nutrients: Essential substances absorbed by plants from the soil to support growth and development.
Minerals: Inorganic substances found in soil that are vital for plant health and growth.
Soil: The top layer of the Earth's surface where plants grow, containing organic matter, minerals, and nutrients.
Absorb: The process by which plants take in water and nutrients from the soil through their roots.
Transport: The movement of water, nutrients, and other substances within the plant, typically through the stem and vascular system.

Impact/Assessment

Most Children will be able to: • explain the function of the parts of a flowering plant • describe the life cycle of flowering plants, including pollination, seed formation, seed dispersal, and germination • give different methods of pollination and seed dispersal, including examples • explain observations made during investigations • look at the features of seeds to decide on their method of dispersal • draw and label a diagram of their created flowering plant to show its parts, their role and the method of pollination and seed dispersal