

What Prior Knowledge should students have?

- Plant identification
- Naming parts of plants
- Seasonal changes in plants
- Plants need water and sunlight to grow
- Animal life cycles

What Skills will students learn (Disciplinary Knowledge)

- Observing change over time and comparative tests
- Identifying and classifying, pattern finding and research using secondary sources.
- Recording a series of observations using labelled drawings and photographs in diaries.
- Identifying, classifying and noticing patterns.

What key knowledge will be taught (Substantive Knowledge)

- Planting and learning the sequence of germination, and comparing and contrasting the requirements of germinating seeds with those of mature plants to maintain healthy growth.
- Investigation skills – setting up, making predictions, asking questions, making observations, data collection and drawing conclusions.
- Consider the basic needs of humans for survival (food, water, air), the need for warmth and shelter, and additional needs for health and wellbeing.
- Identify simple differences between living and non-living things.
- Introduction to the sequence of the human life cycle, first through considering how they have changed since birth, then further changes that happen as a human baby grows and develops into and through adulthood.

Key Vocabulary	Definition
Adult	an animal that has reached maturity.
Animal	a living organism that eats food for nutrition.
Apprentice	a person who is learning a job or skill from an expert.
Bud	a growth on a plant that develops into a new leaf, flower or shoot.
Bulb	rounded part of a plant usually formed underground, which grows into a new plant.
Conclusion	a summary of what was found out in an investigation.
Evidence	data or observations which can be used to form a conclusion.
Germinate	when a first shoot grows from a seed.
Investigate	to use scientific method to solve a problem.
Observations	the record of closely monitoring something.
Predict	to use scientific knowledge to say what you think will be the result of an investigation.
Seed	embryos produced by a plant that can grow into a new plant.

Common Misconceptions

- Children may confuse the requirements of seeds for germination with those of mature plants for growth.
- Children may not recognise that plants that grow tall when deprived of light are not healthy.
- Children often cannot distinguish between essentials for survival, needs for modern life and things that are desirable.
- Children who do not have younger siblings also may not distinguish between what is needed by a baby and what is appropriate for them.

