

### Introduction

In this unit, children will learn what plants need to stay healthy. They will have the opportunity to carry out their own investigations into what plants need to grow well. Children will also closely observe the inside of a seed and learn about the life cycle of a plant. They will also learn how plants look when they don't get the things they need. In their final lesson, children will learn how plants have adapted to live in different environments around the world. Accompanying this unit is a helpful **Knowledge Organiser** that collates the subject knowledge for the unit and is used throughout the unit. There are also **Reasoning Cards** related to the unit provided to develop deep thinking skills in science.

### Health & Safety

Throughout this unit, children will be handling live plants if you choose to use these. Please ensure that you have checked the suitability/toxicity of the plants for handling. Discuss with the children how to handle plants correctly and remind them not to eat or put any of the plants in their mouths. Ensure that children wash their hands thoroughly with soap and water after handling any plants and seeds.

In lesson 1 of this unit, the children will be planting their own seeds. Remind children to wash their hands thoroughly after they have finished planting.

In lesson 2, children will be handling and dissecting seeds. Remind children not to put any seeds in their mouths as this can be dangerous and to thoroughly wash their hands after the activity.

In lesson 4 of this unit, the children will be handling the plants they have grown. Remind children again how to safely handle plants and to wash their hands thoroughly.

### Home Learning

#### What Do Plants Need to Grow Well?

In this task, children identify and sort healthy and unhealthy plants and suggest what a plant needs to be healthy.

#### The Life Cycle of a Plant

In this task, children identify and describe the life cycle of a plant.

### Interests and Talents/Broader Development

Children may be interested in learning more about different plants. This might include finding out more about plants that grow in different climates and more about how food for humans and animals comes from plants. A visit to a local plant nursery or a local farm would allow children to broaden their knowledge further.

### Digital Resources

The following resources are not essential to use as part of the PlanIt unit; however, they would help children to revise and consolidate the learning in the lessons. Please be aware that in order to access these digital resources, you will need to have an Ultimate subscription.

## Assessment Statements

By the end of this unit...

### ...Working Towards the Expected Level:

#### Scientific Knowledge:

- With support, children can suggest what they think a plant needs to grow and stay healthy.
- With support, children can dissect and observe a seed, explaining which parts will grow into a plant and which part is its food.
- With support, children can order the life cycle of a plant.
- With support, children begin to explain that plants need water, light and a suitable temperature to grow and stay healthy.
- With support, children begin to identify what happens if a plant does not get everything it needs.
- With support, children find out how different plants need different amounts of water and light and

different temperatures to grow and stay healthy. They begin to understand how some plants are suited to their habitats.

#### Working Scientifically:

- With support, children can begin to recognise ways in which they might answer scientific questions. They can carry out simple practical tests, using simple equipment.
- With support, children observe the natural world around them.
- With support, children can notice links between cause and effect and talk about their findings to a variety of audiences.
- With support, children can begin to use simple features to compare living things.

### ...Working At the Expected Level:

#### Scientific Knowledge:

- Children can suggest what they think a plant needs to grow and stay healthy.
- Children can dissect and observe a seed, explaining which parts will grow into a plant and which part is its food.
- Children can order the life cycle of a plant and begin to explain what happens at each stage.
- Children explain that plants need water, light and a suitable temperature to grow and stay healthy.
- Children begin to explain what happens if a plant does not get everything it needs.
- Children find out and describe how different plants need different amounts of water and light and different temperatures to grow and stay healthy.

They understand how some plants are suited to their habitats.

#### Working Scientifically:

- Children can begin to recognise ways in which they might answer scientific questions. They can carry out simple practical tests, using simple equipment.
- Children observe the natural world around them.
- Children can notice links between cause and effect and talk about their findings to a variety of audiences in a variety of ways.
- Children can use simple features to compare living things.

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### ...Working At Greater Depth:

#### Scientific Knowledge:

- Children can suggest what they think a plant needs to grow and stay healthy. They begin to understand how a lack of these things can affect a plant. They can also notice links between cause and effect with support.
- Children can dissect and observe a seed, explaining which parts will grow into a plant and which part is its food. They can begin to explain how each part of the seed is used.
- Children can order the life cycle of a plant and explain what happens at each stage. They can use what they know about a plant's life cycle to suggest which stage a plant is at in its life cycle.
- Children explain that plants need water, light and a suitable temperature to grow and stay healthy and explain the reasons why plants have or have not grown well.
- Children can explain what happens if a plant does not get everything it needs.

- Children find out and describe how different plants need different amounts of water, light and different temperatures to grow and stay healthy. They can explain how a variety of plants are suited to their habitats.

#### Working Scientifically:

- Children can recognise ways in which they might answer scientific questions and suggest ways to test these. They can independently carry out simple practical tests, using simple equipment.
- Children observe the natural world around them and begin to explain their observations using simple scientific language.
- Children can notice links between cause and effect with support and talk about their findings to a variety of audiences in a variety of ways. They can also identify and discuss differences between their results.
- Children can use simple features to compare living things and begin to explain their comparisons.

## Lesson Breakdown

### 1. What Do Plants Need to Grow?

90  
mins

Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

Performing simple tests.

Using their observations and ideas to suggest answers to questions.

To design and set up a test to find out what plants need to stay healthy.

#### Purchasing:

- Soil
- Small pots
- Fast growing seeds such as cress or beans
- Fully grown plants (one healthy, one beginning to wilt through dehydration)
- Cotton wool
- Bulbs or different seeds for class plant

### 2. What's Inside a Seed?

60  
mins

Observe and describe how seeds and bulbs grow into mature plants.

Observing closely, using simple equipment.

To look closely at the parts of a seed that will grow into a plant and explain how it will germinate.

#### Standard School Equipment:

- Magnifying glasses

#### Resources That May Need Purchasing:

- Various types of seeds to observe, such as pumpkin seeds, cress seeds and beans - enough for the class to handle.
- Large beans, such as kidney beans - at least one per child. Beans should be pre-soaked for 24 hours. (You can use frozen beans which will not need to be soaked, but will need thawing.)
- A piece of paper or paper towel, per child, to place their seed on as they dissect it.

### 3. Life Cycle of a Plant

60  
mins

Observe and describe how seeds and bulbs grow into mature plants.

To describe the life cycle of a plant.

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#### 4. What Do Plants Need to Stay Healthy? Part 1

60 mins

Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

Using their observations and ideas to suggest answers to questions.

To explain what plants need to grow and stay healthy.

#### 5. What Do Plants Need to Stay Healthy? Part 2

60 mins

Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

Using their observations and ideas to suggest answers to questions.

To describe what happens if plants don't get all the things they need.

#### 6. How Do Plants Grow in Hot, Dry or Cold Places?

70 mins

Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

Using their observations and ideas to suggest answers to questions.

To explain how plants are suited to their habitats.