


Science Learning Journey		Year 2 Spring 2		
<b>Theme Overview</b>		<b>Project Outcomes</b>		
<p>Pupils should be taught to observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grown and stay healthy.</p> <p>Pupils should use the local environment throughout the year to observe how plants grow. Pupils should be introduced to the requirements of plants for germination, growth and survival as well as the processes of reproduction and growth in plants.</p>		<p>Children will be able to name and talk about parts of a plant. They will be able to describe suitable and unsuitable conditions for plants to grow. They will be able to use simple equipment to look closely at plants.</p>		
		<b>Longitudinal study: To visit their class area (Rowan garden by cabin, Hazel - pond area)</b>		
<b>Skills Focus</b>		<b>Sequence of Learning</b>		
<p><b>Main Skills Focus:</b></p> <ul style="list-style-type: none"> <li>Asking simple questions and recognising that they can be answered in different ways.</li> <li>Observing closely, using simple equipment.</li> <li>Performing simple tests.</li> <li>Identifying and classifying.</li> <li>Using their observations and ideas to suggest answers to questions.</li> <li>Gathering and recording data to help in answering questions.</li> </ul> <p><b>Linked Skills Focus:</b> Recall facts from plants and trees from Year 1.</p>		<p><b>Lesson 1</b> <b>LI:</b>I can name a range of plants. I can talk about what plants need to grow and survive. I can talk about the similarities and differences between plants and other living things.</p> <p><b>Mental/Oral Starter:</b> (review) <i>What plants do we know? Where might we find them? Remind children of their work done about plants in Year 1. What did they find out about plants? Make a class concept map asking - What do we already know about plants?</i></p> <p><b>Main input:</b> Explain to children that plants are living things like animals including humans. Discuss living and non-living and the differences and similarities between plants and animals.</p>	<p><b>Lesson 2</b> <b>LI:</b> I can make predictions using prior knowledge. I can plan a fair investigation to answer a question.</p> <p><b>Mental/Oral Starter:</b> (review) <i>Ask the question - can plants grown anywhere? Gather children's initial ideas.</i></p> <p><b>Main input:</b> Today we are going to be scientists and try to answer this question. <i>What experiment could we conduct to find out the answer to this question? Draw out from children that we would have to try plantings seeds/bulbs in a range of locations and observe how well they grow.</i></p> <p>Work together to plan the investigation <b>We will need:</b> A plant that will have light and water. A plant that will have light but no water.</p>	<p><b>Lesson 3</b> I can identify the parts of a seed that will grow into a plant. I can explain what a seed needs to begin to grow. I can explain what 'germination' means.</p> <p><b>Mental/Oral Starter:</b> (review) <i>Children to spend some time looking at the plants that they have been growing under different conditions. Record observations on sheet - has anything changed? What has changed? Why have some changed more than others? Short group discussion</i></p> <p><b>Main input:</b> How do plants begin their lives? Discuss with the children that some plants begin as seeds and some begin as bulbs. Show images on PPT or real life seeds and look at the similarities and differences between them. Explain that different plants come from different seeds. <i>What do you think is inside a seed? Allow children time to discuss and share their ideas and say why they think that.</i> Use the PPT to introduce children to the inside of a seed including the location of the baby plants (embryo) and explain how seeds germinate. Look at PPT and allow children time to</p>

**Teaching science skills and techniques at Mrs Bland's Infant School.**

- we encourage the children to think that we can all be scientists.
- We are curious, we share ideas, explore our environment and ask questions to find out the answers to things we don't not know yet.

*How do we know plants are alive? Do plants grow? Can plants move? Children may not realise plants move as they respond to light and gravity as they grow. Can they breathe (respire)? All living things use oxygen and although you cannot see plants taking in air it is happening. Do plants make new little plants? Plants produce seeds or spores or send out runners (above and underground) to make new plants, cuttings can also be taken. Can plants see, hear, feel, taste and smell? Plants are sensitive to light. Do plants need water? Do plants need food? Plants make their own food (in their leaves) and also absorb water and some nutrients from the soil through their roots.*

Ask children to name some plants and list these in pairs. Try to encourage them to include plants that we eat by asking them to think of plants they see at school, in their garden, in fields, in their kitchen, etc.

**Activity:** Teacher/TA- take out groups of children with identification mats to find out the plants and trees we have on the school grounds. Record pupil voice and take photos. - challenge can you say what is the same or different about some of the plants found.

Which plants do you recognise from Year 1/R - Can you find out the name of one you don't know?

A plant that will water but no light.  
A plant that will have no water and no light.  
Children to be sorted into groups to plant their seeds and label the pots. Children to decide on appropriate locations for the plants to ensure their experiment conditions are met. As a class, discuss predictions for each of the plants. Mixed ability groups.

discuss which parts of the seed they think will grow into which parts of a plant.

Next we are going to dissect a seed to look inside it! Model the process using the PPT to guide you, children to follow along step by step. Model how to locate the baby plant and the food store, using a magnifying glass to look closely.

Use PPT to look at the germination process and how seeds begin to grow. *Having looked at this, which of our plants do you think will/won't grow successfully? Why?*

Record pupil voice. Take photo or do drawings.

**Lesson 4**

**WI:** can name and label the main parts of a plant.

I can explain what the main parts of a plant are for.

I can observe closely, using a magnifying glass.

Ext: I can describe some similarities and differences between the flower parts of other flowers/plants.

**Mental/Oral Starter:** (review) Children to spend some time looking at the plants that they have been growing under different conditions. Record observations on sheet as last week.

**Main input:** Use PPT to revise the different parts of a plant, building on knowledge from year 1. *Can they name and identify the main parts of a plant? i.e., the basic structure of plants: stem, leaf, root, trunk and flower. What is the function of each part?* Discuss what they already know and teach in more detail. Display a detailed picture of a flower with labels of the different parts (e.g., stamen) and discuss their functions.

Today we are going to be dissecting a daffodil to look in more detail at each of the parts. We are going to need to observe closely and use scientific language. Model each step of the dissection and then allow children time to follow each step and to discuss their observations.

**Lesson 5**

**WI:** can explain how a plant changes as it grows.

I can put the stages of a plant's life cycle in order.

I can say which stage of its life cycle a plant is in.

**Mental/Oral Starter:** (review) Children to spend some time looking at the plants that they have been growing under different conditions. Record observations on sheet -

**Main input:** Using the PPT, discuss the meaning of the term 'life cycle'. Look briefly at the life cycles of a frog and explain that all living things have their own life cycle. Show the life cycle of a bean plant and discuss each stage with the children by clicking to learn more about it.

*Explain to your partner how a plant changes as it grows.*

Use the slides to look in more detail about the process of germination and seed dispersal.

Complete the life cycle of a bean plant activity and explain what is happening at some stages of the life cycle. Support can they sequence pictures and talk about what is different in each of the stages.

**Lesson 6 - REVIEW LESSON**

**Can you make a mind map of everything you have learnt about plants this term? Work in mixed ability groups or pairs.**

**Include - what happened in your investigation - where did/didn't the plants grow? Why do you think this is the case?**

**What are the best conditions for plants to grow in, what do they need? Is the same for all types of plant? Why?**

**Can you draw a plant and label it, what vocab can you remember?**

**What plants have you seen growing in your outdoor area, can you name some.**

**Can you record 3 new words you have learnt this term? (you could have a list of new vocab for them to choose from - can you explain what the word means.**

**Plenary:** As scientists, it is important to share your scientific findings. Share what you have learnt with the class