


Mendell Primary School




Aspire Challenge Achieve




Medium Term Plan Science







Year Group: 1	Term: Summer 1	Teacher: Nicole Morning	Subject lead: Sarah Bride	<p>Overview: Plants</p> <ul style="list-style-type: none"> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees Identify and describe the basic structure of a variety of common flowering plants, including trees. <div style="background-color: #90EE90; padding: 2px; border: 1px solid black; margin-bottom: 2px;"> <p>Research Using secondary sources of information to answer scientific questions.</p> </div> <div style="background-color: #4682B4; padding: 2px; border: 1px solid black; margin-bottom: 2px;"> <p>Comparative / fair testing Changing one variable to see its effect on another, whilst keeping all others the same.</p> </div> <div style="background-color: #FF6347; padding: 2px; border: 1px solid black; margin-bottom: 2px;"> <p>Observation over time Observing changes that occur over a period of time ranging from minutes to months.</p> </div> <div style="background-color: #FF69B4; padding: 2px; border: 1px solid black;"> <p>Identifying, grouping and classifying Making observations to name, sort and organise items.</p> </div>	<p>Key End Points: By the end of this unit children will be able to:</p> <ul style="list-style-type: none"> Talk about and notice plants throughout the year. Talk about and describe different plants. Talk about what plants we eat. Talk about how to grow plants. Compare plants. Talk about how they can look after plants
<p>Common Misconceptions: Some children may think:</p> <ul style="list-style-type: none"> plants are flowering plants grown in pots with coloured petals and leaves and a stem trees are not plants all leaves are green all stems are green a trunk is not a stem blossom is not a flower. 		<p>Unit key Vocabulary:</p> <p>Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud</p> <p>Names of trees in the local area</p> <p>Names of garden and wild flowering plants in the local area</p>			
<p>Links to other learning:</p>	<p>Prior Learning:</p> <p>Plant seeds and care for growing plants. (EYFS)</p> <ul style="list-style-type: none"> Begin to understand the need to respect and care for the natural environment and all living things. (EYFS) 	<p>Future Learning:</p> <p>Observe and describe how seeds and bulbs grow into mature plants. (Y2- Plants)</p> <ul style="list-style-type: none"> Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. (Y2 - Plants) Identify and name a variety of plants and animals in their habitats, including microhabitats. (Y2 - Living things and their habitats) Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. (Y3 - Plants) Investigate the way in which water is transported within plants. (Y3 Plants) 	<p>High Quality Text:</p> <p>Tree: Seasons Come, Seasons Go (Patricia Hegarty and Britta Teckentrup)</p> <p>A Little Guide to Wild Flowers (Charlotte Voake)</p> <p>The Things That I LOVE about TREES (Chris Butterworth)</p> <p>Harry's Hazelnut (Ruth Parsons)</p> <p>Scientist to study:</p>	<p>Risk Assessment:</p> <p>Risk assessment for plant hunt in local area.</p>	<p>Teacher CPD:</p> <p>ASE plan exemplification – Shanae.</p> <p>Reach out CPD https://www.reachoutcpd.com/ sign up for free.</p>

				Maria Sibylla Merian (German artist, scientific illustrator, and naturalist)				
<u>Learning Intention</u>	<u>Lesson Outline</u> (Key Questions in colour)			<u>Resources</u>	<u>Vocabulary</u>	<u>Lowest 20% Adaptations</u>		
1	<p>L.I. I can name the basic parts of a plant.</p> 	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is making observations and recording information.</p> <p>Prior learning: Allow children time to reflect on their season walks and their observations from earlier in the year. Share the class floor book. Children also made observational drawings of trees in their books which will support them.</p> <p>What did you notice about the trees in winter?</p> <p>What did you notice about trees in autumn?</p> <p>What did you notice about flowers in winter and autumn?</p> <p>Pre assessment: together as a class create a thought shower of what the children already know about plants and trees. – Teacher record pupil responses. The above questions should support the children with this. At the end of the unit go back and in a different colour pen add in the children’s new learning.</p> <p>Big Question: what are the parts of a plant?</p> <p>Show the children the pictures on the resources PowerPoint. Ask them to think about which they can identify – this could be naming the daffodil or simply saying flower, tree etc... ask them how they know it is a tree or a flower/plant? Take this opportunity to assess the children prior understanding. Allow the children time to explore the pictures and listen out for the following vocabulary (do not share this vocabulary yet but listen during child talk) Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud</p> <p>Ask your child to compare the plants.</p> <p>- How are they the same?</p> <p>- How are they different?</p> <ul style="list-style-type: none"> - Point to the_____ (choose a part of the plant using the word bank above) Do this a few times with the different pictures. Discussing vocabulary along the way. <p>Go outside on the school field and look for as many different types of plants as you can. Talk about the parts of the plants and describe them. Think about:</p> <ul style="list-style-type: none"> - Where they were found (by water, in the park, in shady/light places). - The height or size of the plant. Are some bigger/taller than others? <p>Take photos of the plants you see.</p> <p>Back in class ask the children to choose a plant from outside, they can use their photos to draw their plant. Ask them to label their plant using the word bank. LA children can cut and stick labels to name the parts of their plant.</p>			<p>Ipads, outside area, word bank labels.</p>	<p>Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud</p>		

		<p>Example:</p> 			
2	<p>L.I. I can make predictions about what will happen to a seed planted in soil. I can learn how to care for plants.</p>  	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is making predictions and observations.</p> <p>Prior learning: What part of the plant is this? – Point to a part- repeat until basic parts have been identified. Can you name another part?</p> <p>Big Question: TBC by the children. Show the children some seeds – what do you think will happen to the seeds if we put them in a pot full of soil? Allow children to make predictions. What part of the plant might start to grow first?</p> <p>What do we need to give the seed to help it grow? – assess what the children already know. Ask prompt questions about what we need to grow can any of these be the same for plants?</p> <p>Discuss what we want to find out. What information could we gather? How long, how high. What might we observe? E.g. how long it takes for the plant to grow? How long does it take for the plant to grow leaves? Decide on a big question together.</p>	<p>Seeds, soil, plastic bags or clear cups.</p>	<p>Leaf, flower, petal, root, seed, trunk, stem, light, water, survival, prediction.</p>	

		<p>Allow the children time to plant their seeds with adult support. Plant the seeds in clear plastic bags so the children can make careful observations to answer their big question over time.</p> <p>Ask the children to draw a prediction linked to their big question and say what they need to give the plant for it to survive e.g. water and light.</p>			
3	<p>L.I. I can sort different types of trees and leaves. I can look at leaves to help name the tree.</p>   <p>Exit pass:</p> 	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is making observations.</p> <p>Prior learning: Ask the children to look at their floor book about the seasons. What did they notice about the trees on our school field in different seasons?</p> <p>Big Question: How can we identify trees?</p> <p>Read the book: <i>Tree: Seasons Come, Seasons Go</i> (Patricia Hegarty and Britta Teckentrup) - What do they notice happening?</p> <p>Show the children a picture of an evergreen tree and a deciduous tree in winter – what is the same? What is different?</p> <p>Explain to the children that evergreen trees and plants leaves stay green all year round. Trees that lose their leaves in autumn are called deciduous.</p> <p>Provide the children with a range of evergreen and deciduous trees and ask them to sort them into groups using hoops on the carpet. Take pictures for books. Ask the children if we have any evergreen or deciduous plants or trees on our field – children may need to look back at photographs from season walk in winter in the floor book.</p> <p>Using the tree ID sheet on https://www.woodlandtrust.org.uk/blog/2020/03/tree-id-kids/ go outside to identify trees on the school field using their leaves. Pick up leaves that you find on the floor (do not pick them off of the tree) and describe the leaves. Are they pointy, round, furry, smooth? Then use the ID sheet to try and name the tree. Once the children have collected some different leaves take them back to class and see how we could sort them into groups using the following vocabulary: pointy, round, big, small, smooth, rough. When observing the trees ask the children can they name the basic parts like we did with the plants?</p> <p>What is the stem of a tree? <i>The trunk is the tree's stem and it is covered in bark. Trees can be identified by differences in their bark as well as their leaves, flowers or twigs. Bark develops over time as trees age and is an essential part of trees, like a human's skin. The outer layer provides protection for the tree; it protects it from the hot sun or heavy winds, as well as fungal infections, insect attacks, and the attention of hungry birds and mammals.</i></p> <p>Does a tree have roots? Where? Does a tree have petals? – explain that some trees are blossom trees and they have petals and flowers. What do some trees grow? – fruit.</p> <p>In groups, the children can choose a leaf and take it back to their table. Stick it to a piece of A3 and ask the children to write down observations of their chosen leaf as a group. Ensure the children name the tree it has come from.</p> <p>Example:</p>	<p>Book: Trees: Seasons come and go. Pictures of evergreen and deciduous trees. https://www.woodlandtrust.org.uk/blog/2020/03/tree-id-kids/ - tree identification sheet. PowerPoint resource.</p>	<p>Evergreen, deciduous, rough, smooth, pointy, round, pointy, spiky, bark, trunk, branch.</p>	

		<p>It's green. It has five points. The edges go in and out.</p> <p>Finally ask the children to label a picture of a tree with its basic parts. Depending on time the children could label a large picture on the carpet together and take a photo or draw a tree and label in their books.</p> <p>Exit pass: take time for the children to observe their plants growing – take pupil voice of what changes they have noticed.</p>			
4	<p>L.I. I can name different plants in my local environment.</p>  <p>Exit pass:</p> 	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is naming and observing.</p> <p>Prior learning: What do we call the stem on a tree? What do you call trees that stay green all year? What part of a tree or plant is underground in soil?</p> <p>Big Question: What plants grow in our local area?</p> <p>Explorify – Odd One Out – Flowers in Spring. Ask everyone to come up with as many similarities and differences as they can. If they get stuck, prompt them to think about:</p> <ul style="list-style-type: none"> - Appearance - what they do - where they might be found <p>Then, everyone needs to decide which one is the odd one out and why. Encourage a reason for every answer and there is no wrong answer!</p> <p>Take the children on a plant hunt around the local area – additional risk assessment will need to be planned. Use https://www.plantsnap.com/ to help identify plants on the walk. Use the app to take a photo on the iPad and the app will identify what it is. Once the children have found the name of a plant, ask them to find another one of the same plant nearby to show that they can identify them independently. Use the tick sheet to identify what plants the find.</p> <p>Ask the children to compare plants they see on the walk: e.g. The daisy has white petals but the dandelion has yellow ones. Also use this opportunity to recap and revisit the parts of a plant from lesson 1. Whilst out walking stop and allow the children time to make observational</p>	<p>Plant ID - https://www.plantsnap.com/</p> <p>PowerPoint resource</p> <p>Tick sheet wild flowers – see ASE Olivia for example.</p>	<p>Petal, flower, stem, leaf, roots, bud, daisy, dandelion, primrose, rose.</p>	

		<p>drawings of a flower. These can be put together in the class floor book as evidence of the different plants the children encountered on their walk. (If there is not safe place to stop whilst on the walk complete observational drawing using the photos on the IPad back in class)</p> <p>Exit pass: take time for the children to observe their plants growing – take pupil voice of what changes they have noticed.</p>			
5	<p>L.I. I can investigate different seeds.</p>  <p>Exit pass:</p> 	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is predicting, asking questions and making observations.</p> <p>Prior learning:</p> <p>What do we call trees that lose their leaves?</p> <p>What are the coloured parts of a flower called?</p> <p>What is the stem of a tree called?</p> <p>What type of plants did you find on your walk?</p> <p>Big Question: How are seeds different?</p> <p>Show the children a range of fruits and vegetables that have seeds. Where have these food come from? – explain that some plants and trees grow fruit and vegetables that we can eat. What fruits and vegetables can you name? Can we find out where these fruits and vegetable grow? – take time to research where the fruits and vegetables grow using secondary resources.</p> <p>What do you predict is inside these food items? Discuss ideas.</p> <p>Conclude that they all have seeds inside them. Ask the children to think about if the seeds will be the same? How might they be different? Gather ideas such as: the amount, the size and the shape of the seeds might be different. Open each fruit and compare the seeds from different types of fruit and discuss how are they similar and different? Ask the children if they have any questions about the fruits and their seeds. Teacher model how to use a secondary source to answer a question.</p> <p>Set up trays on each table with a range of the cut fruit. Provide the children with magnifying glasses to observe the fruits and seeds more closely thinking about the following questions:</p> <ul style="list-style-type: none"> • How many seeds do they have? – is this hard with some of the fruits? • What do they look they like? • Where are they in the fruit? <p>Provide children with a similar template to the example and allow them to make notes about the seeds they are observing.</p>	<p>A range of fruit such as: strawberries, peppers, plums, green beans, apples, pomegranates, tomatoes.</p> <p>Magnifying glasses.</p> <p>Paper plates or trays.</p> <p>PowerPoint.</p> <p>Ipads</p>	<p>Seeds, fruit, small. Big, round, oval, pointy, smooth, rough.</p>	



Post assessment: together add to the class thought shower at the beginning of the unit about what the children now know.

Exit pass: take time for the children to observe their plants growing – take pupil voice of what changes they have noticed.