Grindon Infant Science Medium Term Planning – Year 2 Plants

End of Unit Goals

Pupils will be able to:

- Observe and compare how seeds and bulbs grow into mature plants
- Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy

Prior Knowledge

Know basic structure of a flowering plant (Plants Yr1)
Can identify garden, wild plants & trees (Plants Yr1)
Can identify plants in local habitats by sight (Plants Yr1)
Knows seasonal life cycle of deciduous trees (Plants Yr1)
Observed changes to plants across the seasons (Seasons Yr1)
Knows 7 processes of life – growth, nutrition (Living things Yr2)
Habitat provides basic needs – light, water, warmth (Living Yr2)

Skill Objectives

Designing Experiments			Making Conclusions		
I suggest what might happen in an investigation	I suggest what might happen (simple prediction)	I predict cause and effect (science prediction)	I recognise, create & describe number patterns	I describe features and patterns in data and charts	I describe patterns in data, charts and graphs
I begin to identify the cause variable in an investigation	I identify the cause variable correctly in an investigation	I suggest a suitable data range for a cause variable	I describe the changes that are happening	I describe the changes that have happened	I describe my results by linking cause and effect
I follow demo, spoken & picture instructions	I follow short spoken and written instructions in order	I follow written instructions in order	I explore different ways to do things through play	I suggest a different way to do things with help	I suggest improvements to my method

Enquiry Types

Key Vocabulary

Leaf, leaf vein, mid-rib, stem, root, flower, bud, shoot, tap root, side root, seed, bulb, germinate, grow, cotyledon, seedling, adult, water, light, temperature, survive, reproduction, experiment, variable, observe, measure, cause, effect, comparative test, fair test, method, data range, predict, pattern.

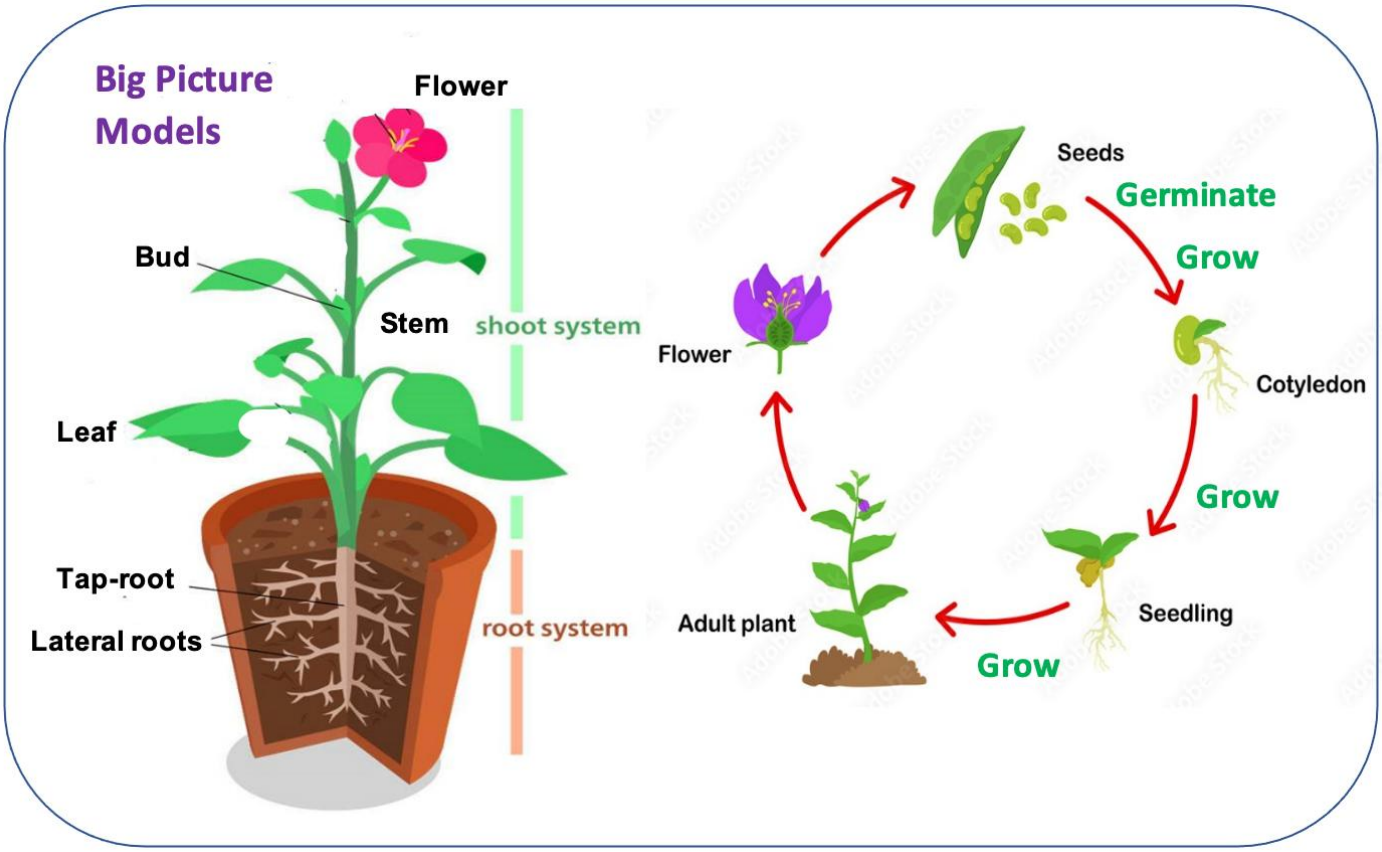
Important Scientists

George Washington Carver (1864-1943) An American ex-slave that became a professor of agriculture at Tuskegee Institute. He developed techniques to improve soil for growing cotton and encouraged poor farmers to grow other crops for better nutrition.

Charles 'Turnip' Townshend (1674-1738) English Viscount that developed crop rotation and was a major figure in the British agricultural revolution. This subsequently led to huge population increase between 1700 and 1850. He was also Secretary of State for Northern England.

Common Misconceptions

Plants are not living. Plants get water directly from rain (leaves take in water). Plants only need water to live. A seed is dead. Seeds need soil to grow. Plants can grow in the dark. All leaves are green. Sunlight is food for plants. Plants need 'plant food' to grow. All plants need the same conditions to grow healthily. A bulb is like a seed. Seeds & bulbs need sunlight to germinate.



Session	Knowledge Objective	Skill Objective	Enquiry Opportunities	Extension Opportunities	SEN
1			Complete KWL Grid Explore and discuss skills and knowledge that will be covered in unit. Provide with big picture model of a plant. Provide with labels for chn to name parts and desribe the functions.		Pre-tech vocab
2	**What are the parts of a plant?**	I can recognise and describe different parts of a plant.	**Recap** **Main** Set up tables with different plants so children can observe and identify parts (leaf, stem, root, flower). Ensure chn are secure with this. Look at leaves with hand lense. Identify veins/ribs. Chn make leaf drawings and label. Look at roots with hand lens. Identify hairs etc. Draw roots and label. **Plenary** Allow time for chn to explain and describe their sketches. Focus on the use of correct vocabulary. **Key Vocabulary**	Extend new vocabulary to wild & unfamiliar plants. Research functions	Pre-tech vocab with using real plants. Provide with vocabulary word cards to support. Provide with labels to identify parts of a leaf and root.

			Leaf, leaf vein, mid-rib, stem, root, flower, bud, shoot, tap root, side root		
3	**How does a plant grow?**	I can use science to describe what I have seen.	**Recap** **Main** Provide chn with seeds and bulbs to look at. Observe using magnifying glasses and electronic microscope. Take pictures, put onto working wall. Add any comments made by chn Show time-laspe video of bean/daffodil https://www.youtube.com/watch?v=w77zPAtVTuI https://www.youtube.com/watch?v=GrMMozadfMc **Plenary** Show living plants (grass, cress, crocus, potato, etc) growing at different stages. Discuss similarities & differences. **Key Vocabulary** Grow, seed, bulb, (tuber), germination, seedling		Pre-tech vocab
4	**What do plants need to grow?**	I can predict. I can record my result.	**Recap** **Main** Look at germinated cress seeds from previous session. Chn draw and label what they see. Look at how straight the cress is and the greenness and strength of stem. Predict what will happen to the seeds when put in a dark cupboard. Draw and label. Leave a few days then record the result and label. **Plenary** Discuss the factors that are needed for the plant to grow. (light, water and warmth) **Key Vocabulary** Predict, water, light	Make bottle greenhouse	Use of word bank
5	**How does a plant grow?**	I can follow short spoken instructions.	**Recap** **Main** Plant up sunflowers. Discuss and look at materials and equipment needed. Discuss the need for light, water and warmth. Write instructions for planting a sunflower seed. **Plenary** **Key Vocabulary** water, light, temperature		Pre-teach steps and vocab. Learn using actions. Use of pictures to sequence.

6	**How does a plant grow?**	I can describe the changes that have happened.	**Recap** **Main** Provide opportunities to measure and observ sunflower growing. Can the chn match the stages of growth from the Big Picture Model? Record in book measurements and observation. **Plenary** What did we notice? Discuss the stages that the plant has gone through. **Key Vocabulary** observe, measure, Leaf, stem, flower, bud, shoot, seed, germinate, grow, , water, light, temperature, survive		
7	**What do plants need to grow?**	I can predict.	**Recap** **Main** Set up an investigation. Which compost grows the tallest sunflower? Take chn through the investigation. Fill in planning board together. Discuss variables that need to be kept the same and those that can change. Set the investigation up. **Plenary** Set investigation up as a class, **Key Vocabulary** experiment, variable, , fair test, predict,		
8	**What do plants need to grow?**	I can record my results. I can describe my results	**Recap** **Main** Look at plants from previous session. Discuss what can be seen. Measure and record. **Plenary** Verbally discuss what can be seen. Think about height and colour. **Key Vocabulary** observe, measure,		Pre-teach vocab Support measuring accurateley
9/10	Opportunities to work in school garden, planting and caring for plants.				

Useful Texts, Website & Resources

Look and Wonder:' The Amazing Life Cycle of Plants- Kay Barnham
Sam Plants a Sunflower – Kate Petty
Big People, Litrtle People: Alexander von Humboldt
Roots, Stems, Leaves and Flowers- Ruth Owen
Songs: Plant a Little Seed, I'm a Little Plant, Flowering Plant Life Cycle