



'An ambitious curriculum that meets the needs of all'

Medium Term Planning - Topic: Plant reproduction

Curriculum Intent	
Skills/National Curriculum Links	<p>In addition to working further on objectives from KS2 and the Cells and Human Reproduction topic, pupils will be taught, following National Curriculum guidelines, the following this topic:</p> <ul style="list-style-type: none"> reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal, including quantitative investigation of some dispersal mechanisms. the importance of plant reproduction through insect pollination in human food security
Spiritual, moral, social, and cultural development	<p>SMSC: Enable students to develop their self-knowledge of their world.</p> <p>PSHE/British Values: Our actions are affecting wildlife populations, this could affect future resources and food availability for the human race.</p> <p>Skills Builder: Listening (Receiving, retaining and processing info), Speaking (The oral transmission of info and ideas), Problem solving (Find a solution to a situation or challenge), Creativity (imagination and generation of new ideas), Staying positive (The ability to use tactics and strategies to overcome setbacks), aiming high (Set clear and tangible goals), Leadership and teamwork</p>
Numeracy	
Literacy	<p>Vocabulary Tier 2: Structure, attract, transferred, develop, parachute, shore,</p> <p>Vocabulary Tier 3: petal, sepal, stamen, anther, pollen, filament, carpel, stigma, style, ovary, ovule, pollination, fertilisation, fruit, seed, germination, seed dispersal,</p> <p>Reading: Following a written method and read risk assessments. Students may be directed to the textbook; this could be in lesson or at home on Kerboodle.</p> <p>Writing: Describing and explaining scientific phenomenon, free response writing for describing precautions taken, use of word mat to promote sentence formation.</p> <p>Oracy: inclusion of BEST resources which are research evidence on common misunderstandings in science, effective diagnostic questioning and formative assessment, constructivist approaches to building understanding, and effective sequencing of key concepts that promote metacognitive talk and dialogue.</p>
Becoming future ready	<p>Careers/Employability:</p> <ul style="list-style-type: none"> - Zookeeper - Marine biologist - Florist
Adaptation	<p>Throughout this topic, quality first teaching will provide differentiation:</p> <p>By product: Linear assessments and differentiated practical work.</p> <p>By resource: Lessons are differentiated per class and students, worksheets are coloured blue if support and assessments are linear.</p> <p>By Intervention: by providing different levels of supervision and support</p> <p>By Progressive Questioning: exploring pupils' understanding through interactive dialogue.</p> <p>By Grouping: according to prior attainment, gender, social preference, preferred learning style.</p> <p>By Task: Pupils should be involved in the identification of targets which are meaningful to them and in the selection of an appropriate task from the given range.</p> <p>By Offering Optional Activities: In class or as homework, to extend learning.</p> <p>This QFT/SEND provision will be explicit within the lesson-by-lesson schemes of work.</p>
QFT/SEND Provision	
Implementation	To be able to:

Curriculum Delivery	<p><i>Know</i></p> <ul style="list-style-type: none"> - Name the parts of a flower. - Follow instructions to dissect a flower. <p><i>Apply</i></p> <ul style="list-style-type: none"> - Identify the main structures in a flower and link their structure to their function. - Use appropriate techniques to dissect a flower into its main parts. <p><i>Extend</i></p> <ul style="list-style-type: none"> - Explain how the structures of the flower are adapted to their function. - Record detailed observations from a flower dissection. <hr/> <p><i>Know</i></p> <ul style="list-style-type: none"> - State what is meant by pollination. - Name two methods of pollination. <p><i>Apply</i></p> <ul style="list-style-type: none"> - Describe the process of pollination. - Describe the differences between wind- and insect– pollinated plants. <p><i>Extend</i></p> <ul style="list-style-type: none"> - Suggest how plant breeders use knowledge of pollination to carry out selective breeding. - Explain the processes of wind and insect pollination, comparing the similarities and differences between the two. <hr/> <p><i>Know</i></p> <ul style="list-style-type: none"> - State what is meant by fertilisation in plants. - State what seeds and fruit are. - Make and record observations of germination. <p><i>Apply</i></p> <ul style="list-style-type: none"> - Describe the process of fertilisation in plants. - Describe how seeds and fruits are formed. - Make and record observations in a table with clear headings and units, using data to calculate percentage germination. <p><i>Extend</i></p> <ul style="list-style-type: none"> - Explain the process of fertilisation in plants, explaining the role of each of the parts involved in the process. - Explain how the germination of seeds occurs. - Make and record observations in a table, using data to calculate percentage germination, evaluating experimental procedure. <hr/> <p><i>Know</i></p> <ul style="list-style-type: none"> - Make and record observations of germination. <p><i>Apply</i></p> <ul style="list-style-type: none"> - Make and record observations in a table with clear headings and units, using data to calculate percentage germination. <p><i>Extend</i></p> <ul style="list-style-type: none"> - Make and record observations in a table, using data to calculate percentage germination, evaluating experimental procedure. <hr/> <p><i>Know</i></p> <ul style="list-style-type: none"> - State what is meant by seed dispersal. - Name the methods of seed dispersal. - Plan a simple experiment, stating the variables, when given a hypothesis. <p><i>Apply</i></p> <ul style="list-style-type: none"> - Describe methods seed dispersal, and use the features of seeds and fruit to explain how they are adapted to their method. - Explain why seed dispersal is important to survival of the parent plant and its offspring. - Plan a simple experiment to test one hypothesis about seed dispersal, identifying a range of variables. <p><i>Extend</i></p> <ul style="list-style-type: none"> - Explain how the adaptations of seeds aid dispersal. - Develop an argument why a particular plant structure increases the likelihood of successful production of offspring. - Plan and design an experiment to test a hypothesis about seed dispersal, clearly explaining all the variables involved. 	
Learning Outcomes (Core Knowledge)		
Current learning to be developed in the future within:	<p>Before: At KS2 you will have covered living things can be grouped in a variety of ways, explored and use classification keys to help group, identify and name a variety of living things in their local and</p>	<p>Future:</p> <p>At GCSE you learn in more detail about structure & function of plant organs, how organisms interact and factors affecting population sizes.</p>

wider environment, and recognise that environments can change and that this can sometimes pose dangers to living things.



Assessment

Refer to assessment maps for formative and summative assessment opportunities.

Impact

Attainment and Progress – Refer to assessment results / data review documentation.