



‘An ambitious curriculum that meets the needs of all’  
**Medium Term Planning - Topic: Fieldwork**

<b>Curriculum Intent</b>	
<b>Skills/National Curriculum Links</b>	<p>In addition to working further on objectives from KS2 and the variation topic, pupils will be taught, following National Curriculum guidelines, the following this topic:</p> <ul style="list-style-type: none"> <li>- Describe how to carry out a field investigation into the distribution and abundance of organisms in an ecosystem and explain how to determine their numbers in a given area.</li> <li>- Ecologists use a range of investigation methods using transects and quadrats to determine the distribution and abundance of species in an ecosystem.</li> </ul>
<b>Spiritual, moral, social, and cultural development</b>	<p><b>SMSC:</b> Enable students to develop their self-knowledge of their own body.</p> <p><b>PSHE/British Values:</b> Fieldwork is important in conservation of our planet.</p> <p><b>Skills Builder:</b> 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>
<b>Numeracy</b>	Area of fields, counting organisms in quadrats, use of a tapemeasure
<b>Literacy</b>	<p><b>Vocabulary Tier 2:</b> tape measure, measuring, area, distribution</p> <p><b>Vocabulary Tier 3:</b> quadrat, transect, organisms, abundance</p> <p><b>Reading:</b> 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><b>Writing:</b> Describing and explaining scientific phenomenon, free response writing for describing precautions taken, use of word mat to promote sentence formation.</p> <p><b>Oracy:</b> 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>
<b>Becoming future ready</b>	<p><b>Careers/Employability:</b></p> <p>Biologist</p> <p>Research scientist</p> <p>Farmer</p> <p>Zoologist</p>
<b>Adaptation</b>	Throughout this topic, quality first teaching will provide differentiation:
<b>QFT/SEND Provision</b>	<p><b>By product:</b> Linear assessments and differentiated practical work.</p> <p><b>By resource:</b> Lessons are differentiated per class and students, worksheets are coloured blue if support and assessments are linear.</p> <p><b>By Intervention:</b> by providing different levels of supervision and support</p> <p><b>By Progressive Questioning:</b> exploring pupils’ understanding through interactive dialogue.</p> <p><b>By Grouping:</b> according to prior attainment, gender, social preference, preferred learning style.</p> <p><b>By Task:</b> 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><b>By Offering Optional Activities:</b> 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>
<b>Implementation Curriculum Delivery</b>	<p>To be able to:</p> <div style="border: 1px solid black; padding: 5px;"> <p>Know</p> <p>To use quadrats to collect data.</p> </div>



<b>Learning Outcomes (Core Knowledge)</b>	<p><i>Apply</i> <i>To collect a full set of results that enables an estimation of the total number of daisies to be calc</i></p> <p><i>Extend</i> <i>To calculate the population of an organism from data provided.</i></p> <p><i>Know</i> <i>To use a transect line and quadrats to collect valid data.</i> <i>To state that there are abiotic and biotic factors in an environment</i></p> <p><i>Apply</i> <i>To collect a full set of results.</i> <i>To identify abiotic and biotic factors</i></p> <p><i>Extend</i> <i>To plot a graph showing plant numbers against light intensity</i> <i>To be able explain how abiotic and biotic factors interact</i></p>	
<b>Current learning to be developed in the future within:</b>	<p><b><i>Before:</i></b> <i>At KS2 simple identification of plant material could have taken place but no field studies to estimate the abundance of a particular species.</i></p>	<p><b><i>Future:</i></b> <i>GCSE Biology Biodiversity will explore this topic deeper</i></p>
<b>Assessment</b>	Refer to assessment maps for formative and summative assessment opportunities.	
<b>Impact</b>	Attainment and Progress – Refer to assessment results / data review documentation.	