



'An ambitious curriculum that meets the needs of all'

Medium Term Planning - Topic: Earth Structure

Curriculum Intent	<p>In addition to working further on objectives from Year __, pupils will be taught, following National Curriculum guidelines, the following this topic:</p>
Skills/National Curriculum Links	<p>Earth and Atmosphere</p> <ul style="list-style-type: none">• the composition of the Earth• the structure of the Earth• the rock cycle and the formation of igneous, sedimentary and metamorphic rocks <p>properties of ceramics</p>
Spiritual, moral, social, and cultural development	<p>SMSC: This unit of work provides several opportunities for students to work together practically in groups, which encourages them to share views and opinions and take instructions from others. Group work opportunities encourage teamwork and respect for others. In practical lessons students follow laboratory rules for the safety of all.</p> <p>PSHE/British Values: The impact of the change in the atmosphere is affecting resources, wildlife and is a huge issue around the world. Students will complete teamwork, leadership and put science into everyday situations. They will show mutual respect during classwork.</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	<p>Measuring temperature with a thermometer and calculation of cooling.</p>
Literacy	<p>Vocabulary Tier 2: composition, formation, compare, compaction, deposition, processes, sediments, erupts, pottery, clay.</p> <p>Vocabulary Tier 3: Crust, mantle, core, mineral, sedimentary rock, igneous rock, metamorphic rock, porous, weathering, sediment, erosion, transport, deposition, strata, durable, magma, lava, obsidian, rock cycle, uplift, ceramic.</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. Converting diagrams into text.</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> <p>Archaeologist Analyst Climatologist Paleontologist</p>
Adaptation	<p>Throughout this topic, quality first teaching will provide differentiation:</p>



QFT/SEND Provision	<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 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>
Implementation Curriculum Delivery	<p>To be able to:</p> <p>Securing Mastery Goals</p> <ul style="list-style-type: none">● 3.7.1 The three rock layers inside Earth are the crust, the mantle and the core. <p>Enquiry processes</p> <ul style="list-style-type: none">● 2.4 Select a good way to display data. <p>Securing Mastery Goals</p> <ul style="list-style-type: none">● 3.7.1 Explain why a rock has a particular property based on how it was formed.● 3.7.1 Identify the causes of weathering and erosion and describe how they occur. <p>Exceeding Mastery Goals</p> <ul style="list-style-type: none">● 3.7.1 Predict planetary conditions from descriptions of rocks on other planets. <p>Enquiry processes</p> <ul style="list-style-type: none">● 2.3 Make a conclusion and explain it. <p>Securing Mastery Goals</p> <ul style="list-style-type: none">● 3.7.1 Explain why a rock has a particular property based on how it was formed. <p>Exceeding Mastery Goals</p> <ul style="list-style-type: none">● 3.7.1 Identify circumstances that indicate fast processes of change on Earth and those that indicate slower processes. <p>Enquiry processes</p> <ul style="list-style-type: none">● 2.12 Make an experimental prediction. <p>Securing Mastery Goals</p> <ul style="list-style-type: none">● 3.7.1 Construct a labelled diagram to identify the processes of the rock cycle. <p>Exceeding Mastery Goals</p> <ul style="list-style-type: none">● 3.7.1 Describe similarities and differences between the rock cycle and everyday physical and chemical processes. <p>Enquiry processes</p> <ul style="list-style-type: none">● 2.3 Make a conclusion and explain it. <p>Enquiry processes activity</p> <ul style="list-style-type: none">● 3.7.1 Model the processes that are responsible for rock formation and link these to the rock features. <p>Securing Mastery Goals</p> <ul style="list-style-type: none">● 3.7.1 Explain why a rock has a particular property based on how it was formed. <p>Exceeding Mastery Goals</p> <ul style="list-style-type: none">● 3.7.1 Suggest how ceramics might be similar to some types of rock. <p>Red denotes interleaving; aspects of knowledge covered previously.</p>
Current learning to be developed in the future within:	<p>At GCSE physics you learn in more detail about structure of the Earth, our Solar System, the life cycle of stars and the Red Shift. In GCSE chemistry you will also cover in more detail how the Earth's atmosphere has changed and consequences of global warming.</p>
Assessment	<p>Refer to assessment maps for formative and summative assessment opportunities.</p>
Impact	<p>Attainment and Progress – Refer to assessment results / data review documentation.</p>