

Curriculum intent (overview) – To deepen students' skills and knowledge through a broad and balanced curriculum which prepares students for adulthood.

7E - Explorer Curriculum – Science/6 Lessons weekly

Year	2023 – 2024 Autumn 1 (8 wks)	2023 – 2024 Autumn 2 (7 wks)	2023 – 2024 Spring 1 (5 wks)	2023 – 2024 Spring 2 (5 wks)	2023 – 2024 Summer 1 (7wks)	2023 – 2024 Summer 2 (7 wks)
	<p><u>Topics:</u></p> <p>Intro to lab</p> <p>C Materials</p> <p><u>Suggested Key Questions:</u> What are the common scientific equipment? How do we work safely in the lab?</p> <p>How can we group different materials?</p> <p><u>Key Skills and Knowledge:</u></p> <p>Intro to lab</p> <ul style="list-style-type: none"> • Pupils to know the Laboratory rules and to start abiding by them. • Pupils to see, handle and name some of the commonly used science apparatus. • <i>Pupils to practise drawing science apparatus correctly.</i> • <i>Pupils to practise turning a Bunsen burner off and on</i> 	<p><u>Topic:</u></p> <p>P light & Sounds</p> <p><u>Suggested Key Questions:</u> What are the properties of light?</p> <p>What are the properties of sound?</p> <p><u>Key Skills and Knowledge:</u></p> <p>To know that we need light in order to see things and that dark is the absence of light</p> <p>To know how light travels</p> <p>To know that light is reflected from surfaces</p> <p>To be able to explain how we see things</p> <p>To know that light from the sun can be</p>	<p><u>Topic:</u></p> <p>B Living things and their habitats</p> <p><u>Suggested Key Questions:</u> What are living things?</p> <p><u>Key Skills and Knowledge:</u></p> <p>To be able to differentiate between things that are alive, dead and never been alive</p> <p>To be able to classify animals into main taxonomic groups</p> <p>To be able to classify plants into main taxonomic groups</p> <p>To use keys to identify local plants and animals.</p> <p>To be able to describe the differences in the life</p>	<p><u>Topic:</u></p> <p>C Rocks</p> <p><u>Suggested Key Questions:</u> Are all rocks the same?</p> <p><u>Key Skills and Knowledge:</u></p> <p>To know that rocks are natural materials</p> <p>To know how rocks and minerals can be very useful to us</p> <p>To sort rocks by their appearance and texture.</p> <p>To know that water passes through some rocks and not others.</p> <p>To group rocks by their hardness.</p> <p>To know the structure of the Earth.</p> <p>To understand how sedimentary,</p>	<p><u>Topic:</u></p> <p>B Plants</p> <p><u>Suggested Key Questions:</u> What do plants need?</p> <p><u>Key Skills and Knowledge:</u></p> <p>To be able to identify and name a variety of common wild and garden plants, including trees.</p> <p>To be able to identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>To know what plants need to grow.</p> <p>To be able to describe how water is transported within plants</p> <p>To be able to identify</p>	<p><u>Topic:</u></p> <p>P Electricity</p> <p><u>Suggested Key Questions:</u> What do we use electricity for?</p> <p><u>Key Skills and Knowledge:</u></p> <p>Be able to identify common appliances that run on electricity</p> <p>Be able to understand how to keep safe around electrical appliances.</p> <p>Be able to construct simple circuits</p> <p>Be able to use recognised symbols when representing a simple circuit in a diagram.</p> <p>Be able to recognise common conductors and insulators of electricity</p> <p>Be able to investigate</p>

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<p><i>correctly, and changing the type of flame.</i></p> <p><i>Pupils to be able to use a microscope, thermometer and measuring equipment correctly</i></p> <p>Materials</p> <p>To be able to Identify and name everyday materials, including wood, plastic, glass, metal, water, and rock</p> <p>To distinguish between an object and the material from which it is made</p> <p>To describe the simple physical properties of a variety of everyday materials</p> <p>To compare and group together a variety of everyday materials on the basis of their simple physical properties</p> <p>To be able to test materials for properties</p> <p>To be able to describe conductors and insulators of heat</p> <p>To identify and discuss how some materials are used for more than one</p>	<p>dangerous and how we can protect ourselves.</p> <p>To be able to explain how shadows are formed.</p> <p>To be able to explain how the size of shadows can be changed.</p> <p>To be able to explain how sound sources vibrate to make sounds.</p> <p>To be able to explain how vibrations change when the loudness of a sound changes.</p> <p>To be able to explain how the pitch of a sound can be altered.</p> <p>To be able to explain how sounds travel to reach our ears.</p> <p>To be able to explain how we hear sounds.</p> <p>Explain how sounds change over distance.</p>	<p>cycles of a mammal, an amphibian, an insect and a bird</p> <p>To be able to describe the life process of reproduction in some plants and animals.</p> <p>To be know what a habitat is and what it provides for the living things found in it.</p> <p>To be able to construct a food chain.</p> <p>To be able to interpret a food web.</p> <p>To know how humans impact the environment and the problems it can cause for living things.</p>	<p>metamorphic and igneous rocks are formed.</p> <p>To know that if a rock is heated and cooled lots of times it eventually cracks</p> <p>To know that rain and wind can cause the weathering of rocks.</p>	<p>the parts of a flower and describe their functions in reproduction.</p> <p>To be able to describe what happens in pollination.</p> <p>To be able to describe what happens in fertilisation.</p> <p>To be able to describe the different ways seeds may be dispersed.</p>	<p>ways in which the brightness of a bulb or volume of a buzzer or speed of a motor is changed</p>
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	<p>product.</p> <p>To identify and discuss how different materials are used for the same product.</p> <p>To be able to describe which properties make a material suitable or unsuitable for a particular job.</p> <p>To identify that some materials can change shape by squashing, bending, stretching and twisting, and others can't.</p>					
<p>Links to Gatsby Benchmarks:</p>	<p>4. Linking curriculum learning to careers</p> <p>What careers need to know about materials? Builder, glazier, carpenter, sculptor, engineer, metal worker and architect</p>	<p>4. Linking curriculum learning to careers</p> <p>What careers need to know about light and sound? Theatre/concert technicians, photographer, sound engineer</p>	<p>4. Linking curriculum learning to careers</p> <p>What careers need to know about living things? Environmental officer. Zoo keeper, botanist</p>	<p>4. Linking curriculum learning to careers</p> <p>What careers need to know about rocks? Geologists, sculptor</p>	<p>4. Linking curriculum learning to careers</p> <p>What careers need to know about plants? gardener, garden designer, florist, grounds man/person, farmer, farm labour and park warden/keeper.</p>	<p>4. Linking curriculum learning to careers</p> <p>What careers need to know about electricity? Electrician</p>