

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

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Year	2022 – 2023 Autumn 1 Unit 1	2022 – 2023 Autumn 2 Unit 2	2022 – 2023 Spring 1 Unit 3	2022 – 2023 Spring 2 Unit 4	2022 – 2023 Summer 1 Unit 5	2022 – 2023 Summer 2 Unit 6
	<p>Topic: Intro to lab</p> <p>B Body parts and senses</p> <p>Suggested Key Questions: What are the common scientific equipment? How do we work safely in the lab? How do we sense the world around us?</p> <p>Key Skills and Knowledge:</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 correctly, and changing the type of flame.</i> 	<p>Topic: C Grouping and classifying</p> <p>Suggested Key Questions: How can we group different materials?</p> <p>Key Skills and Knowledge:</p> <ul style="list-style-type: none"> • To be able to use all senses to identify some similarities and differences between materials. • To be able to sort and group materials in different ways. • To be able to explore magnetism, transparency, floating and sinking. • To be able to use some of the correct vocabulary for properties of materials. • To be able to recognise objects that are natural and 	<p>Topic: P Electricity</p> <p>Suggested Key Questions: What do we use electricity for?</p> <p>Key Skills and Knowledge:</p> <ul style="list-style-type: none"> • To know that electricity can be dangerous. • To know that electricity can produce light, heat, sound, movement. • To be able to connect given circuit components to light the bulb/make the buzzer sound. • To be able to contribute to class discussion and questioning. • Does the number of batteries in a circuit make a difference to the brightness of the bulb? • Does the length of wire or colour of 	<p>Topic: B Keeping Healthy</p> <p>Suggested Key Questions: How can we stay healthy?</p> <p>Key Skills and Knowledge:</p> <ul style="list-style-type: none"> • To know about the importance of food and water to humans. • To be able to distinguish between healthy and less healthy foods. • To be able to recognise the need for a variety of foods and exercises. • To be able to plan a healthy meal. • To be able to differentiate between different kinds of exercise. • To know that food is needed for growth, health and activity. • To be able to group foods simply e.g. <i>fillers, fruit/vegetables, dairy, meat/fish, fatty etc.</i> • To know that food is vital for energy, growth and health. 	<p>Topic: C Acids and alkalis</p> <p>Suggested Key Questions: What are acids and alkalis?</p> <p>Key Skills and Knowledge:</p> <ul style="list-style-type: none"> • To be aware that many everyday chemicals and foods contain acids • To understand that acids can burn you and can be dangerous • To know that we must wear goggles when using acids • To recognise common hazard symbols associated with acids • To observe the effect of acids on bicarbonate of soda • To use litmus paper as a more sophisticated method of detecting an acid 	<p>Topic: P Light</p> <p>Suggested Key Questions: What are the properties of light?</p> <p>Key Skills and Knowledge:</p> <ul style="list-style-type: none"> • To be able to identify and sort a range of sources e.g. sun, TV, fire, etc • To be able to compare light sources for brightness • To be able to identify dark places. • To be able to link shadows and darkness. • To be able to explore making shadows. • To know that light travels from sources. • To know that light travels in straight lines. • To be able to explain how shadows are formed. • To know that light bounces off all surfaces. • To know that when light bounces off shiny, regular surfaces we can see an image.

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<p>• <i>Pupils to be able to use a microscope, thermometer and measuring equipment correctly.</i></p> <p>B Body parts and senses</p> <ul style="list-style-type: none"> • To be able to name the external parts of the body. • To associate parts of the body with particular functions. • To be able to suggest what is inside the body. • To be able to explore the 5 senses practically. • To know which organs are associated with which sense. • To know the importance of senses in survival. <p>Key Skills: Begin to make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers.</p>	<p>those that are man-made (processed).</p> <ul style="list-style-type: none"> • To be able to list different uses for materials. • To know what other materials could do the same job. • To be able to identify common materials – in a variety of places. • To be able to test materials for properties. • To know electrical and heat conductors and insulators. • To be able to use a thermometer and know temperature is measured in °C. • To be able to classify materials as solid, liquid or gas • To know the main simple properties of solids, liquids and gases <p>Key Skills: Key Skills: Ask some relevant questions and use different types of scientific enquiries to answer them.</p> <p>Begin to raise their own questions about the world around them.</p>	<p>wire or knots in wire make a difference to the brightness of the bulb or whether the bulb lights up</p> <p>Key Skills: Learn to use some new equipment appropriately.</p> <p>Begin to see a pattern in my results.</p>	<ul style="list-style-type: none"> • To be able to test for starch and fat. • To be able to group foods according to carbohydrate, protein, fat, vitamins and minerals. • To be able to describe the process of digestion • To be able to label the main parts of the digestive system <p>Key Skills: Begin to recognise when a simple fair test is necessary and help to decide how to set it up.</p> <p>Gather, record, and begin to classify and present data in a variety of ways to help in answering questions.</p>	<ul style="list-style-type: none"> • To use the term “indicator” when describing an acid • To recall that the opposite to an acid is an alkali • To understand that a substance that is neither acidic nor alkaline is called neutral • To know that tap water is (more or less) neutral • To know that we can make an acid neutral if we add an alkali • To understand that we can use neutralisation to treat bee stings wasp stings and indigestion. <p>Key Skills: Begin to identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Use simple secondary sources to find answers.</p>	<ul style="list-style-type: none"> • To be able to explain what reflection is and how it is different to an image. • To be able to explain why dull, uneven surfaces do not produce images. • To know that our eyes receive light. • To be able to describe how light from sources travels through the air to our eyes. • To be able to draw and show direction of the path of light involved in seeing an object. • To be able to identify the outside features of eyes. <p>Key Skills: I am beginning to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Begin to use some scientific language to talk and, later, write about what they have found out. Begin to use relevant scientific language.</p>
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<p>Links to Gatsby Benchmarks:</p>	<p>Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance</p> <p>Students to consider what skills are required to be a paramedic, doctor, nurse, vet that leads onto looking at what skills are needed for different roles they are interested in and what qualifications.</p>	<p>Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance Benchmark 4 – Linking Curriculum to learning Benchmark 8 – Personal Guidance</p> <p>Students to consider what skills are required for waiters, builders, mechanics, to access the opportunities they are interested in. Going into work places/remote visits. Research. Writing C.Vs and cover letters.</p>	<p>Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance Benchmark 5- Encounters with employers and employees</p> <p>Students to consider what skills are required to be an electrician, technician, games designer to access the opportunities they are interested in. Research.</p>	<p>Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance Benchmark 5- Encounters with employers and employees</p> <p>Students to consider what skills are required to be a dietician, nutritionist, health care assistant to access the opportunities they are interested in. Research.</p>	<p>Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance Benchmark 6 – Experience of Work places</p> <p>Students to consider what skills are required to be a chemist, pharmacist, cleaner, paramedic, to access the opportunities they are interested in. Looking at careers in sports and researching sports.</p>	<p>Benchmark 2, – Learning from the Career and Labor Market information. Benchmark 3 – Addressing the needs of the student and * - Personal Guidance Benchmark 6 – Experience of Work places</p> <p>Students to consider what skills are required to be an optician, director, projector, radiographer, to access the opportunities they are interested in. Looking at careers in sports and researching sports.</p>
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