

Nelson Academy Science Curriculum Overview 2021/22

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	See EYFS Overview	See EYFS Overview	See EYFS Overview	See EYFS Overview	See EYFS Overview	See EYFS Overview
Year 1	Keeping warm in the ice age (links to materials) Animal Classification. Herbivores, carnivores, omnivores and extinct animals. Animals and their needs.	Looking after living things, plants and growth links to Joseph Banks the Botanist. The five senses.	Seasons and the Weather. Materials (weather effecting materials)		Taking care of the Earth.	Taking care of the Earth. Jane Goodall
Year 2	The Human body. Scientist focus: Edward Jenner	Matter (to include measurements of matter)	Introduction to Astronomy	The Earth	Living things and their environment.	Living things and their environment. Scientist: Louis Pasteur (made milk safe to drink)
Year 3	Magnetism Simple machines		Cycles of Nature Seasonal Cycles		Life Cycles Insects	
Year 4	Light Optics and Sound	Astronomy		Human body	Animal classification	Light Optics and Sound
Year 5	Rocks and soils	Chemistry: solutions	Electricity (including Michael Faraday)	Human body: Circulatory and respiratory systems Elizabeth Garrett-Anderson Florence Nightingale		Evolution of plants and animals Charles Darwin
Year 6	Plant structures and processes		Classifying living things	Taxonomies	Human Body: Hormones and reproduction	Human body: Life cycles and reproduction

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By the end of Key Stage 1, pupils will:	By the end of Key Stage 2, pupils will:
<p>Ask simple questions and recognise that they can be answered in different ways</p> <p>Observe closely, using simple equipment</p> <p>Perform simple tests</p> <p>Identify and classify</p> <p>Use observations and ideas to suggest answers to questions</p> <p>Gather and record data to help answer questions</p> <p>know how plants grow and what they need to survive. (Y1)</p> <p>Know about common plants and trees, their structure and the differences between them. (Y1)</p> <p>Know about the four seasons, the associated weather and the varying day lengths throughout the year. (Y1)</p> <p>Know the basic needs of animals and how their young are similar to their parents (Y1)</p> <p>Know about a variety of common animals and their structure: carnivores, herbivores and omnivores. (Y1)</p> <p>Know about our 5 senses and how we use them. (Y1)</p> <p>Know the different materials we use and their properties. (Y1)</p> <p>Know what a habitat is and how it is suited to a specific animal. (Y2)</p> <p>Know how animals obtain their food and what a food chain is. (Y2)</p> <p>Know about the diversity of ocean life and what threatens our oceans. (Y2)</p> <p>Know why materials are best suited to particular jobs and how solid objects can be changed. (Y2)</p> <p>Know how environmental change can pose dangers to habitats. (Y2)</p> <p>Identify basic parts of our body systems and know and the importance of a healthy lifestyle. (Y2)</p> <p>Know that everything is made of matter and made up of parts too small for us to see. (Y2)</p> <p>Describe and classify objects according to what they are made of, and according to their physical properties (Y2)</p>	<p>Ask relevant questions and use different types of scientific enquiries to answer them.</p> <p>Be able to set up simple practical enquiries, comparative and fair tests.</p> <p>Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment.</p> <p>Gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p> <p>Know the life processes that happen each season (Y3)</p> <p>Know the life cycle and how plants and animals reproduce. (Y3)</p> <p>Know the Earth's surface is mostly covered by water and what the water cycle is. (Y3)</p> <p>Know the physical characteristics and life cycle of insects and how they can be both helpful and harmful. (Y3)</p> <p>Know how magnets can attract and repel depending on each pole. (Y3)</p> <p>Know how machines help make work easier, and how they are applied and combined in familiar tools (y3)</p> <p>Know how surfaces affect the movement of objects (y3)</p> <p>Know how living things are grouped through classification and how environmental changes effect living things. (Y4)</p>

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Know the names and common examples of 3 states of matter. (Y2)
 Know that water is an example of changing states of matter of a single substance (Y2)
 Know that the sun is a star and a source of energy, light and heat (Y2)
 Know that the earth revolves around the sun and that it rotates. (Y2)
 Know that when it is day where you are, it is night for people on the opposite side of the Earth. (y2)
 Know the layers of the Earth and the formation and characteristics of different kinds of rocks (Y2)

Know the role of producers, consumers and decomposers in the food chain (y4)
 Know the functions of our skeleton and muscles (y4)
 Understand how our digestive system works, the functions of our teeth and the food chain process. (Y4)
 Know the importance of nutrients from a varied and balanced diet. (Y4)
 Know that light is reflected from surfaces and this is needed in order for us to see. (Y4)
 Know how to protect our eyes. (Y4)
 Know how shadows are formed. (Y4)
 Understand how we hear sound and the difference between volume and pitch. (Y4)
 Understand the shape and movement of the planets in the solar system. (Y4)

Know the main parts of the human circulatory system and their functions. (Y5)
 Understand the impact lifestyle can have on our bodies. (Y5)
 Understand how fossils are formed. (Y5)
 Know how to group different kinds of rocks based on their properties. (Y5)
 Know how mountains are formed and that movement of the tectonic plates can result in natural disasters (Y5)
 Know how to construct a simple circuit and which materials are conductors/ insulators. (Y5)
 Understand that the number and voltage of cells used in a circuit impact the lamp/buzzer. (Y5)
 Know how to group materials into solids, liquids and gases and how their states can be changed. (Y5)
 Know how to separate mixtures and which changes of state are reversible. (Y5)
 Understand how living things have adapted to their environment thus resulting in evolution. (Y5)

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	<p>Understand that offspring inherit characteristics but are not identical to their parents. (Y5)</p> <p>Understand the functions of the different parts plants and the life cycle of plants through pollination. (Y6)</p> <p>Understand reproduction and the differences in life cycles. (Y6)</p> <p>Understand the effects of aging on our bodies. (Y6)</p> <p>Know why living things are classified into broad groups. (Y6)</p> <p>Know the structure of cells and how they are organised into tissues, organs, and systems. (Y6)</p>
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