

Learn together, grow together Progression in Science



In Science pupils will learn about the world around them. They will leave Medina with the ability to apply their knowledge to future challenges. Children will develop skills of resilience when working scientifically. All children will be taught Scientific vocabulary and use this when making links between Scientific topics.

Skill	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working scientifically	<p>Explore the natural world around them by making observations and drawing pictures of animals and plants</p> <p>Know some similarities and differences between the natural world around them and contrasting environments and be able to draw upon experiences from in class learning</p> <p>Understand some important processes and changes in the natural world around them including seasons and changing states of matter</p>	<p>Use different approaches to answer scientific questions (books, pictures, videos)</p> <p>Carry out simple tests (Does all plastic float?)</p> <p>Organise objects or materials into groups (colour, shape, material, use)</p>	<p>Use simple equipment for observations (magnifying glass)</p> <p>Link ideas and answers to observations</p> <p>Collect information to help answer scientific questions (tick sheets, record data)</p>	<p>Set up simple fair tests (Will a magnet be attracted to the paperclip if a ruler was in front of it?)</p> <p>Collect and present data from scientific experiments (tables, bar charts)</p> <p>Use results from experiments to draw simple conclusions and suggest improvements</p>	<p>Take accurate measurements using a range of scientific apparatus (measuring jug, metre stick, ruler, thermometer)</p> <p>Present findings using tables, graphs and charts</p> <p>Use clear evidence to support ideas</p>	<p>Plan Scientific investigations, including controlling variables when appropriate (amount of solute)</p> <p>Record data using diagrams, keys, tables and a range of graphs</p> <p>Report conclusions and explanations from Scientific investigations</p>	<p>Use test results to design further investigations (Does different types of exercise affect heart rate?)</p> <p>Use simple models to describe scientific ideas (adaptation of micro-organisms, circulatory system)</p> <p>Use simple models to describe scientific ideas (adaptation of micro-organisms, circulatory system)</p> <p>Identify scientific evidence to support or refute scientific ideas</p>
Animals including humans		<p>Name the main parts of the body including senses</p>	<p>Describe how some plants and animals are suited to different habitats</p> <p>Describe how animals obtain food by eating plants or other animals</p> <p>Describe the basic needs of humans and other</p>	<p>Explain some of the functions of skeletons and muscles in animals</p>	<p>Use a classification key to identify animals</p> <p>Describe simple functions of the basic parts of the digestive systems in humans</p> <p>Construct and interpret a variety of food chains including</p>	<p>Describe the life process of reproduction in animals</p>	<p>Classify some animals and microorganisms and explain their reasoning</p> <p>Identify how adaptations of some animals over time can lead to evolution</p> <p>Explain the main parts and functions of the human</p>

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			animals(food, water and air)		producers, predator and prey		circulatory system, including heart and blood vessels Recognise that living things produce offspring which are not usually identical to their parents
Plants		Name the main parts of plants and trees Describe how the weather varies with the seasons	Describe basic needs for plant growth (light and water)	Describe the main requirements for plant growth (air,light,water,nutrients,space) Explain the main stages of plant reproduction (pollination,fertilisation and seed dispersal)	Use a classification key to identify plants.	Describe the life process of reproduction in some plants.	Classify some plants and explain their reasoning Identify how adaptations of some plants over time can lead to evolution
Materials and Forces		Distinguish between an object and the material from which it is made Describe the simple physical properties of a variety of everyday materials	Describe the different uses of materials according to their properties	Identify the three main rock types (sedimentary, metamorphic, and igneous) and their properties Group materials according to their magnetic properties	Compare and group materials together according to their state- solid, liquid or gas Explain the stages of the water cycle	Explain how mixtures can be separated through filtering, sieving and evaporating Explain that some irreversible changes form new materials Identify the effects of air resistance, water resistance and friction.	
Light and Sound				Notice that light is reflected from surfaces Find patterns in the sizes of shadows	Recognise that vibrations from sounds travel through a medium to the ear	Describe the movement of the Earth and other planets Explain day and night on Earth and the apparent	Explain that we see things which either emit or reflect light

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						movement of the Sun Explain that gravity causes unsupported objects to fall towards the Earth	
Electricity					Construct a simple series circuit identifying and naming basic parts		Explain how the number of voltage of cells affects bulbs, buzzers or motors in a circuit Use recognised symbols when representing an electrical diagram