Science Curriculum Statement

		Curious	Creative	Confident
Intent		At Montpelier, we believe that a high-quality Science education provides the foundations for our pupils to understand the world around them. Our Science curriculum balances the acquisition of both substantive and disciplinary knowledge. Our aim is for pupils to have ambitious aspirations and feel confident to enter future careers within Science. To achieve this, we enhance our curriculum with trips, visitors and assemblies that showcase exciting careers and personnel within the Science community. We intend for our pupils to become the scientists of the future.		
Implementation	**What (For further information on the programmes of study please refer to the Science curriculum overview document)**	**KS1**	**Lower KS2**	**Upper KS2**
		During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: asking simple questions and recognising that they can be answered in different ways of observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions. Within the following programmes of study: ● Animals including humans ● Plants ● Living Things ● Seasonal Changes ● Materials	During years 3 and 4, pupils are taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific	During years 5 and 6, pupils are taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations identifying scientific evidence that has been used to support or refute ideas or arguments. Within the following programmes of study: ● Animals including humans ● Properties and changes of materials

<table>
<tr><td rowspan="2"></td><td></td><td></td><td>evidence to answer questions or to support their findings.

Within the following programmes of study:

• Animals including humans
• Rocks
• Sound
• Plants
• Electricity
• Light
• States of Matter
• Forces and Magnets
• Living things and their habitats</td><td>• Electricity
• Forces
• Light
• Living things and their habitats
• Earth and Space
• Evolution and Inheritance</td></tr>
<tr><td>How</td><td colspan="3">• Quality teaching of science each week
• Beginning each Science lesson with retrieval practise
• Teachers of Science model excellent oracy
• Specific teaching of relevant scientific vocabulary and polysemous words
• Pupils have the opportunity to participate in practical scientific enquiries
• Through the modelling and specific teaching of the working scientifically skills within the ‘I DO, WE DO, YOU DO’ model
• Pupils have access to and regularly use a range of scientific equipment
• Lessons are taught both indoors and outdoors
• Specialist visitors to inspire and enhance learning
• Pupils have access to a range of quality books about Science both fiction and non-fiction
• Pupils have the opportunity to take part in local and national Science competitions
• Through annual celebration of British Science week</td></tr>
<tr><td colspan="2">Assessment</td><td colspan="3">• Regular formative assessment: A floorbook used in each classroom to capture the learning of the working scientifically skills.
• Retrieval practise at the beginning of each lesson.
• Quality questioning, including specific questions relating to common and relevant misconceptions within the unit of learning
• Feedback provided on written outcomes in alignment with the school’s feedback policy. These are recorded in the pupil’s learning journeys.
• Summative assessment at the end of each unit of learning, inclusive of questions which that assess substantive and disciplinary knowledge.</td></tr>
<tr><td colspan="2" rowspan="2">Impact</td><td>Quality of education</td><td>Behaviour and attitudes</td><td>Personal development</td></tr>
<tr><td>Pupils can name and talk about famous scientists.</td><td>Pupils are excited about Science and engage in activities with enthusiasm.</td><td>Pupils are able to make connections between their world and Science learning in school.</td></tr>
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	Pupils can identify the uses of Science within our world. Pupils are able to carry out fair testing. Pupils can recall some topical facts. Pupils know when and how to use scientific equipment (where appropriate, to a good degree of accuracy). Pupils can identify and model the 'working scientifically' skills. Pupils can engage in discussion using appropriate Scientific vocabulary. Pupils can record results in an appropriate format. Pupils can debate scientific concepts.	Pupils ask enquiry-lead questions. Pupils ask 'Why?' 'How?' and 'What if?' Pupils engage in discussion around scientific concepts/ theories. Pupils engage respectfully and with high levels of excitement with Science trips/ visitors. Pupils participate enthusiastically with British Science Week celebrations and competitions.	Generate opinions on some scientific concepts. Pupils are motivated to continue their Science learning at home (researching, testing, exploring). Pupils can name potential future careers within the Science community. Pupils can recognise themselves as Scientists.