



Subject Science at Denton CP School Statement of Intention

- Children will gain an understanding of the world through the specific disciplines of biology, chemistry and physics.
- Children will learn how science has changed our lives and how it is vital to the world's future prosperity.
- The focus in all teaching will be the essential aspects of the knowledge, methods, processes and uses of science.
- As the children go through school they will be taught the key foundational knowledge and concepts, and recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena.
- Children will be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.
- Children will be taught to describe processes and key characteristics in common language, and use, technical terminology accurately and precisely.
- Applying mathematical knowledge to their understanding of science will be encouraged, including collecting, presenting and analysing data.
- Children will be encouraged to 'work scientifically' to answer relevant scientific questions.
- Scientific enquiry will include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils should seek answers to questions through collecting, analysing and presenting data.
- The children will be encouraged to use good quality language that they encounter in developing their scientific vocabulary and articulating scientific concepts clearly and precisely.
- Teachers will ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Aims; Children will leave Denton CP School with an understanding of nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them: they will be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future: they will have a developing scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics and an enjoyment of scientific exploration and enquiry.



Skills	Year 1	Year 2	Year 3 All skills covered dependant on activities chosen Cycle B T 5/6	Year 4	Year 5	Year 6
Planning and Communication and Sources	<p>Draw simple pictures (B5/6)</p> <p>Talk about what they see and do</p> <p>Use simple charts to communicate findings</p> <p>Identify key features ask questions (B5/6)</p>	<p>Describe their observations using some scientific vocabulary (B5/6)</p> <p>Use a range of simple texts to find information</p> <p>Suggest how to find things out (B5/6)</p> <p>Identify key features ask questions (B5/6)</p>	<p>Use pictures, writing, diagrams and tables as directed by their teacher</p> <p>Use simple texts, directed by the teacher, to find information</p> <p>Record their observations in written, pictorial and diagrammatic forms</p> <p>Select the appropriate format to record their observations</p>	<p>Record observations, comparisons and measurements using tables and bar charts</p> <p>Begin to plot points to form a simple graph</p> <p>Use graphs to point out and interpret patterns in their data</p> <p>Select information from a range of sources provided for them</p>	<p>Record observations systematically (A 1/2)</p> <p>Use appropriate scientific language and conventions to communicate quantitative and qualitative data (A 1/2)</p> <p>Select a range of appropriate sources of information including books, internet and CD Rom (B 5/6) (A 1/2)</p>	<p>Choose scales for graphs which show data and features effectively (B 5/6)</p> <p>Identify measurements and observations which do not fit into the main pattern</p> <p>Begin to explain anomalous data (B 5/6)</p> <p>Use appropriate ways to communicate quantitative data using scientific language</p>
Enquiring and Testing and Obtaining and Presenting Evidence	<p>Test ideas suggested to them</p> <p>Say what they think will happen (B5/6)</p> <p>Use first hand experiences to answer questions (B5/6)</p> <p>Begin to compare some living things (B5/6)</p>	<p>Use simple equipment provided to aid observation (B5/6)</p> <p>Compare objects, living things or events</p> <p>Make observations relevant to their task (B5/6)</p> <p>Begin to recognise when a test or comparison is unfair(B5/6)</p> <p>Use first hand experiences to</p>	<p>Put forward own ideas about how to find the answers to questions</p> <p>Recognise the need to collect data to answer questions</p> <p>Carry out a fair test with support</p> <p>Recognise and explain why it is a fair test</p> <p>With help, pupils begin to realise that scientific ideas are based on evidence</p>	<p>With help, pupils begin to realise that scientific ideas are based on evidence</p> <p>Show in the way they perform their tasks how to vary one factor while keeping others the same</p> <p>Decide on an appropriate approach in their own investigations to answer questions</p> <p>Describe which factors they are varying and</p>	<p>Use previous knowledge and experience combined with experimental evidence to provide scientific explanations (B 5/6) (A 1/2)</p> <p>Recognise the key factors to be considered in carrying out a fair test (B 5/6) (A 1/2)</p>	<p>Describe evidence for a scientific idea (B 5/6)</p> <p>Use scientific knowledge to identify an approach for an investigation (B 5/6)</p> <p>Explain how the interpretation leads to new ideas (B 5/6)</p>

		answer questions (B5/6)		which will remain the same and say why		
Observing and Recording	<p>Make observations using appropriate senses (B5/6)</p> <p>Record observations (B5/6)</p> <p>Communicate observations orally, in drawing, labelling, simple writing and using ICT (B5/6)</p>	<p>Respond to questions asked by the teacher (B5/6)</p> <p>Ask questions (B5/6)</p> <p>Collect and record data (supported by the teacher) (B5/6)</p> <p>Suggest how they could collect data to answer questions (B5/6)</p> <p>Begin to select equipment from a limited range (B5/6)</p>	<p>Make relevant observations</p> <p>measure using given equipment</p> <p>select equipment from a limited range</p>	<p>Carry out measurement accurately</p> <p>Make a series of observations, comparisons and measurements</p> <p>Select and use suitable equipment</p> <p>Make a series of observations and measurements adequate for the task</p>	<p>Make a series of observations, comparisons and measurements with increasing precision (B5/6) (A 1/2)</p> <p>Select apparatus for a range of tasks (b 5/6)</p> <p>Plan to use apparatus effectively (B5/6)</p> <p>Begin to make repeat observations and measurements (B5/6) (A 1/2)</p>	<p>Measure quantities with precision using fine-scale divisions</p> <p>Select and use information effectively (B 5/6)</p> <p>Make enough measurements or observations for the required task (B 5/6)</p>
Considering Evidence and Evaluating	<p>Make simple comparisons and groupings (B5/6)</p> <p>Say what has happened (B5/6)</p> <p>Say whether what has happened was what they expected (B5/6)</p>	<p>Say what has happened (B5/6)</p> <p>Say what their observations show and whether it was what they expected (B5/6)</p> <p>Begin to draw simple conclusions and explain what they did (B5/6)</p> <p>Begin to suggest improvements in their work (B5/6)</p>	<p>Begin to offer explanations for what they see and communicate in a scientific way what they have found out</p> <p>Begin to identify patterns in recorded measurements</p> <p>Suggest improvements in their work</p> <p>Evaluate their findings</p>	<p>Predict outcomes using previous experience and knowledge and compare with actual results</p> <p>Begin to relate their conclusions to scientific knowledge and understanding</p> <p>Suggest improvements in their work, giving reasons</p>	<p>Make predictions based on their scientific knowledge and understanding (B 5/6)</p> <p>Draw conclusions that are consistent with the evidence (B 5/6)</p> <p>Relate evidence to scientific knowledge and understanding (B 5/6)</p> <p>Offer simple explanations for any differences in their results (B 5/6)</p> <p>Make practical suggestions about how their working methods</p>	<p>Make reasoned suggestions on how to improve working methods</p> <p>Show how interpretation of evidence leads to new ideas</p> <p>Explain conclusions, showing understanding of scientific ideas (B 5/6)</p>

					could be improved	
Context	<ul style="list-style-type: none"> Plants Animals- including humans Every day materials Seasonal changes 	<ul style="list-style-type: none"> Animals- including humans Living things and their habitats Uses of every day materials 	<ul style="list-style-type: none"> Plants Animals- including humans Rocks Light Forces and magnets 	<ul style="list-style-type: none"> Living things and their habitats Animals- including humans States of matter Sound Electricity 	<ul style="list-style-type: none"> Living things and their habitats Animals- including humans Properties and changes of materials Earth and Space Forces 	<ul style="list-style-type: none"> Living things and their habitats Animals- including humans Evolution and inheritance Light Electricity