

SUBJECT INTENT STATEMENT

Science

LEADER:

E.Chapman



INTENT		CONTENT	
<p><i>“Nothing in life is to be feared, it is only to be understood.” Marie Curie</i></p> <p>We believe science creates opportunities for children to be able to understand and question the world we live in. On entry to Reception at Holy Name, around 30% of our pupils have a good understanding of the world around them. With our children leading busy lives, surrounded by technology and adult direction, there is little need for our children to consider what is going on around them. Therefore, within our science curriculum, we endeavour:</p> <ul style="list-style-type: none"> To develop our pupils to think like scientists. Encourage our pupils to ask questions, consider why things happen, explain phenomena and how it influences life today and in the future. To allow pupils to work collaboratively and practically through a wide range of exciting and engaging activities. <p>We aspire to ensure that our pupils can make links to their own lives and we hope to inspire our children to consider how science can support their own potential future careers.</p>		<p>The National Curriculum is the core of our planning. Our high quality science education provides the foundations for understanding the world through biology, chemistry and physics.</p> <p>Working scientifically is an aspect which is taught throughout every science module to develop pupils’ scientific enquiry skills in preparation for Key Stages 3 & 4 at secondary school.</p> <p>In our Early Years Foundation Stage and Key Stage 1, pupils are taught to experience observe phenomena. In Lower Key Stage 2 they are able to broaden their scientific view of the world around them and in Upper Key Stage 2 their understanding is deepened.</p> <p>Science knowledge is embedded across year groups through a robust progression map, which builds upon prior learning. Pupils revisit concepts as they move through year groups. Skills are developed through working scientifically across phases and then progressed through the different key stages.</p>	
CULTURAL CAPITAL	PEDAGOGY	VOCABULARY	
<p>This is developed through:</p> <ul style="list-style-type: none"> Investigations take place throughout every unit to provide children with real life experiences and the opportunity to think critically. Learning outdoors: We are lucky enough to have an outdoor area which children can explore habitats and observe changes to wildlife and plants. Trips: visits take place to The National Space Centre, Thinktank, Sandwell Valley, Ash End Farm, Birches Valley and Red House Park. Science Week: children are encouraged to dress as a famous scientist in order to immerse children with how science can assist their future careers and broaden their understanding of the world. Workshops and Clubs take place to enhance learning and provide children with further hands-on experiences. Projects & Showcases: These take place once a year and assist children in being able to work scientifically, use their own choice of research and make links to broader areas of the curriculum. Competitions to encourage science at home. 	<p>Much of science teaching adopts constructivism pedagogy, where children are at the centre of learning through project work and inquiry based learning and social constructivism pedagogy, where the teacher will model questions and promote collaborative working.</p> <p>Science lessons follow a structure whereby pupils have the opportunity to activate prior knowledge (through questions, videos and real life examples) where they can discuss misconceptions and start to build new connections.</p> <p>They will then complete an activity which is suited to the pupils needs (this will usually stem from a question which needs investigating or researching).</p> <p>Pupils then have the opportunity to test their understanding through independent or collaborative work.</p> <p>At the end of each lesson, knowledge and skills will be assessed in preparation for the next lesson</p>	<p>Pupils will develop an understanding and accurate use of scientific vocabulary which has been specified on the vocabulary progression map.</p> <p>Pupils will use these to articulate and describe processes, methods and concepts.</p> <p>By the end of KS2 children are expected to be able to read, spell and pronounce scientific vocabulary correctly.</p>	
ASSESSMENT		RETENTION	
<p>Assessment takes place at the beginning of each module, throughout and at the end of the module using formative and summative tasks.</p> <p>A final teacher judgement is given at the end of each module.</p> <p>Throughout the year, Working Scientifically is assessed with a focus on either Plan, Do, Record or Review.</p> <p>By the end of the year, all aspects are reviewed.</p>		<p>Modules are revisited throughout phases to support knowledge and skills.</p> <p>Pupils are actively involved in lessons so that misconceptions can be clarified and learning can be built upon.</p>	
LEARNING ENVIRONMENT		SMSVC	
<p>In order to support our pupils’ understanding of science, every time a new module is taught the teacher will update their classroom science working wall.</p> <p>The working wall will show:</p> <p>Our Key Principles and photographs showing how they have been met.</p> <ul style="list-style-type: none"> Key scientific vocabulary Evidence of pupils’ knowledge, wonder and learning (KWL grids/post-it notes) <p>Examples of pupil work / investigations</p>		<p>Our aim is to develop our pupils to enable them to become successful scientists who can have bright futures.</p> <p>They will be scientists who observe and wonder, listen to others ideas, ask and answer questions through real life experiences, explore the world safely, share ideas and discoveries and use a range of tools to work collaboratively to solve problems.</p> <p>Pupils will know how they can look after the world they live in and be well equipped to make positive changes.</p>	