

The school's Christian vision

Our five core Christian values
Trust, Honesty, Compassion, Respect and Kindness
are centred on


'Do to others as you would like them to do to you.' (Luke 6:13)

Through these values we inspire children to be the best they can be. Encouraging high aspirations and expectations that will allow them to achieve, explore, succeed and prepare for their own path through life.



St Michael's CE VA Primary School, Lyme Regis

Statutory framework for early years and foundation stage

<p>Communication and Language</p> <p>ELG: Listening, Attention and Understanding</p> <ul style="list-style-type: none"> Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions; Make comments about what they have heard and ask questions to clarify their understanding; Hold conversation when engaged in back-and-forth exchanges with their teacher and peers. <p>ELG: Speaking</p> <ul style="list-style-type: none"> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary; Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate; Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher. 	<p>Personal, Social and Emotional Development</p> <p>ELG: Self-Regulation</p> <ul style="list-style-type: none"> Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate; Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions. <p>ELG: Managing Self</p> <ul style="list-style-type: none"> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge; Explain the reasons for rules, know right from wrong and try to behave accordingly; <p>ELG: Building Relationships</p> <ul style="list-style-type: none"> Work and play cooperatively and take turns with others; Form positive attachments to adults and friendships with peers; Show sensitivity to their own and to others' needs. 	<p>Understanding the World</p> <p>ELG: The Natural World</p> <ul style="list-style-type: none"> Explore the natural world around them, making observations and drawing pictures of animals and plants; Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class; Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. 
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Development Matters

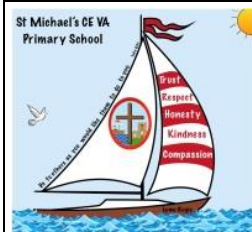
<p>Birth to three- babies, toddlers and young children will be learning to:</p> <ul style="list-style-type: none"> Listen and respond to a simple instruction Use gestures like waving and pointing to communicate. Reach or point to something they want while making sounds. Copy your gestures and words. Understand simple instructions like "give to nanny" or "stop". Recognise and point to objects if asked about them. Generally focus on an activity of their own choice and find it difficult to be directed by an adult. Understand simple questions about 'who', 'what' and 'where' (but generally not 'why'). Explore materials with different properties. Explore natural materials, indoors and outside. Explore and respond to different natural phenomena in their setting and on trips. Make connections between the features of their family and other families. Notice differences between people. 	<p>3 and 4 year-olds will be learning to:</p> <ul style="list-style-type: none"> Pay attention to more than one thing at a time, which can be difficult. Use a wider range of vocabulary. Understand a question or instruction that has two parts, such as: "Get your coat and wait at the door". Understand 'why' questions, like: "Why do you think the caterpillar got so fat?" Use longer sentences of four to six words. Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions. Start a conversation with an adult or a friend and continue it for many turns. Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. Talk about what they see, using a wide vocabulary. Explore how things work. Plant seeds and care for growing plants. Understand the key features of the life cycle of a plant and an animal. Begin to understand the need to respect and care for the natural environment and all living things. Explore and talk about different forces they can feel. Talk about the differences between materials and changes they notice. 	<p>Children in reception will be learning to:</p> <ul style="list-style-type: none"> Understand how to listen carefully and why listening is important. Learn new vocabulary. Use new vocabulary through the day. Ask questions to find out more and to check they understand what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Connect one idea or action to another using a range of connectives. Describe events in some detail. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. Listen to and talk about stories to build familiarity and understanding. Use new vocabulary in different contexts. Engage in non-fiction books. Listen to and talk about selected non-fiction to develop a deep familiarity with new knowledge and vocabulary. Explore the natural world around them. Describe what they see, hear and feel whilst outside. Recognise some environments that are different from the one in which they live. Understand the effect of changing seasons on the natural world around them.
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Progression in Science

Focus in...

Autumn term	Spring term	Summer term
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		Working Scientifically			Knowledge		
		Planning and Predicting	Investigating and Observing	Recording, Analysing and Evaluating	Biology	Chemistry	Physics
EYFS	Reception	<ul style="list-style-type: none"> Planning, making decisions about how to approach a task, solve a problem and reach a goal 	<ul style="list-style-type: none"> Use simple scientific criteria. Explore objects/ materials/ living things/ resources designed to model scientific processes. 	<ul style="list-style-type: none"> Developing ideas of grouping, sequences, cause and effect Reviewing how well the approach worked Listen and respond to stories about scientific processes/ events/ objects. 	<p><u>Animals including humans</u></p> <ul style="list-style-type: none"> Make observations of animals Explain why some things occur, and talk about changes Seasonal changes Looks closely at similarities, differences, patterns and change – in relation to the four seasons and when different weather occurs 	<p><u>Materials</u></p> <ul style="list-style-type: none"> Know about similarities and differences in relation to places, objects, materials and living things Know the properties of some materials and can suggest some of the purposes they are used for 	<ul style="list-style-type: none"> Developing ideas of grouping, sequences, cause and effect in relation to movement i.e toys, cars, rough surfaces
		<ul style="list-style-type: none"> Making predictions testing their ideas 	<ul style="list-style-type: none"> Checking how well their activities are going 	<ul style="list-style-type: none"> Create drawings and models of their environment 			<ul style="list-style-type: none"> Become familiar with basic scientific concepts such as floating, sinking, experimentation.
		<ul style="list-style-type: none"> Finding ways to solve problems 	<ul style="list-style-type: none"> Changing strategy as needed 	<ul style="list-style-type: none"> Talk about similarities and differences. 	<p><u>Plants</u></p> <ul style="list-style-type: none"> Make observations of plants Explain why some things occur, and talk about changes Living things and their habitats Know about similarities and differences in relation to places, objects, materials and living things Talk about the features of their own immediate environment and how environments might vary from one another 		



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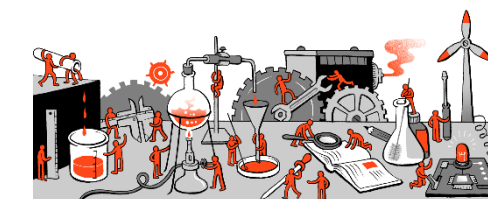
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St Michael's CE VA Primary School, Lyme Regis

National Curriculum Requirements - Key stage 1 Pupils should be taught:

Working Scientifically

- To ask simple questions and recognising that they can be answered in different ways
- Observe closely, using simple equipment
- Perform simple tests
- Identify and classify
- Use their observations and ideas to suggest answers to questions
- Gathering and record data to help in answering questions



Programme of study - National Curriculum Requirements stated below in the knowledge section.

Progression in Science

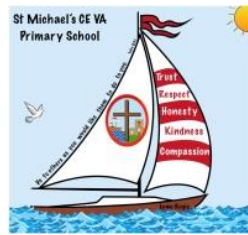
Focus in...

Autumn term

Spring term

Summer term

Key Stage 1	Year 1	Working Scientifically			Knowledge	
		Planning and Predicting	Investigating and Observing	Recording, Analysing and Evaluating	Biology	Chemistry
		<ul style="list-style-type: none"> <input type="checkbox"/> Suggest what might happen <input type="checkbox"/> Suggest simple ways to test ideas <input type="checkbox"/> Organise a group of others to carry out an investigation/ observation. 	<ul style="list-style-type: none"> <input type="checkbox"/> Make observations using appropriate senses. <input type="checkbox"/> Explore using the five senses. <input type="checkbox"/> Use simple equipment to observe closely <input type="checkbox"/> Make simple comparisons and groupings. <input type="checkbox"/> Perform simple tests 	<ul style="list-style-type: none"> <input type="checkbox"/> Communicate findings in simple ways. 		
	<ul style="list-style-type: none"> <input type="checkbox"/> Communicate observations orally, in drawings, labelling, simple writing and using ICT. 	<ul style="list-style-type: none"> <input type="checkbox"/> Collect evidence to try to answer a question. 	<u>Animals including humans</u> <ul style="list-style-type: none"> <input type="checkbox"/> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals <input type="checkbox"/> Identify and name a variety of common animals that are carnivores, herbivores and omnivores <input type="checkbox"/> Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) <input type="checkbox"/> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense <input type="checkbox"/> <u>Seasonal Changes</u> <input type="checkbox"/> Observe changes across the four seasons <input type="checkbox"/> Observe and describe weather associated with the seasons and how day length varies 			
	<ul style="list-style-type: none"> <input type="checkbox"/> Ask simple questions and recognise that they can be answered in different ways 	<ul style="list-style-type: none"> <input type="checkbox"/> Use charts to communicate findings. <input type="checkbox"/> Explain whether what happened was what they expected. 	<u>Plants</u> <ul style="list-style-type: none"> <input type="checkbox"/> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees <input type="checkbox"/> Identify and describe the basic structure of a variety of common flowering plants, including trees 			



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National Curriculum Requirements - Key stage 1 Pupils should be taught:

Working Scientifically

- To ask simple questions and recognising that they can be answered in different ways
- Observe closely, using simple equipment
- Perform simple tests
- Identify and classify
- Use their observations and ideas to suggest answers to questions
- Gathering and record data to help in answering questions



Programme of study - National Curriculum Requirements stated below in the knowledge section.

Progression in Science

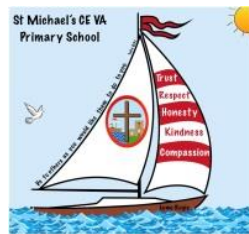
Focus in...

Autumn term

Spring term

Summer term

Key Stage 1	Year 2	Working Scientifically			Knowledge	
		Planning and Predicting	Investigating and Observing	Recording, Analysing and Evaluating	Biology	Chemistry
		<ul style="list-style-type: none"> <input type="checkbox"/> With help, suggest some ideas and questions. <input type="checkbox"/> Think about how to collect evidence. <input type="checkbox"/> Suggest what might happen. <input type="checkbox"/> Think about and discuss whether comparisons and tests are fair or unfair . <input type="checkbox"/> Choose own equipment which can be used to explain their choices. 	<ul style="list-style-type: none"> <input type="checkbox"/> Make observations and comparisons using simple equipment, following simple instructions. <input type="checkbox"/> Use first hand experiences and, with help, simple information sources to answer questions. <input type="checkbox"/> Begin to recognise when a test or comparison is unfair. 	<ul style="list-style-type: none"> <input type="checkbox"/> Say whether what happened was what was expected. <input type="checkbox"/> Use comparative adjectives to explain patterns, e.g. bigger, smaller, greater, and higher. <input type="checkbox"/> Identify, group and classify 	<p><u>Animals including humans (Year B)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Understand that animals, including humans, have offspring which grow into adults <input type="checkbox"/> Describe the basic needs of animals, including humans, for survival (water, food and air) <input type="checkbox"/> Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene 	<p><u>Uses of Everyday Materials (Year A)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses <input type="checkbox"/> Describe how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching
	<ul style="list-style-type: none"> <input type="checkbox"/> Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum 	<ul style="list-style-type: none"> <input type="checkbox"/> Record findings in simple ways including tables, graphs etc... 	<p><u>Living things and their habitats (Year A)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Explore and compare the differences between things that are living, dead, and things that have never been alive <input type="checkbox"/> Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other <input type="checkbox"/> Identify and name a variety of plants and animals in their habitats, including micro-habitats <input type="checkbox"/> Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food 			
	<ul style="list-style-type: none"> <input type="checkbox"/> Use simple equipment to observe closely including changes over time <input type="checkbox"/> Perform simple comparative tests 	<ul style="list-style-type: none"> <input type="checkbox"/> Use his/her observations and ideas to suggest answers to questions noticing similarities, differences and patterns <input type="checkbox"/> Gather and record data to help in answering questions including from secondary sources of information 	<p><u>Plants (Year B)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Observe and describe how seeds and bulbs grow into mature plants <input type="checkbox"/> Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy 			



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National Curriculum Requirements – Lower Key stage 2 Pupils should be taught:

- Ask relevant questions and using different types of scientific enquiries to answer them
- Set up simple practical enquiries, comparative and fair tests
- Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Gather, record, classify and present data in a variety of ways to help in answer questions
- Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Identify differences, similarities or changes related to simple scientific ideas and processes
- Use straightforward scientific evidence to answer questions or to support their findings.



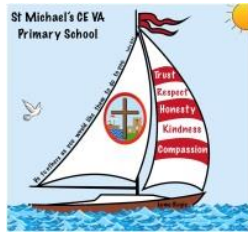
Programme of study - National Curriculum Requirements stated below in the knowledge section.

Progression in Science

Focus in...

Autumn term Spring term Summer term

Lower Key Stage 2	Year 3	Working Scientifically			Knowledge		
		Planning and Predicting	Investigating and Observing	Recording, Analysing and Evaluating	Biology	Chemistry	Physics
		<ul style="list-style-type: none"> □ Respond to suggestions □ With help put forward ideas about testing. □ Make predictions. □ With help, consider what constitutes a fair test. 	<ul style="list-style-type: none"> □ Ask relevant questions and use different types of scientific enquiries to answer them □ Make observations and comparisons. □ Use first-hand experience and simple information sources to answer questions. 	<ul style="list-style-type: none"> □ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables □ Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions □ Say whether what happened was what was expected and draw simple conclusions. □ With help, identify simple patterns and suggest explanations. 	<p><u>Animals including humans (Year B)</u></p> <ul style="list-style-type: none"> □ Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat □ Identify that humans and some other animals have skeletons and muscles for support, protection and movement 		
<ul style="list-style-type: none"> □ Set up simple practical enquiries and comparative tests □ Plan and carry out a fair test. 	<ul style="list-style-type: none"> □ Explain when a test or comparison is unfair. □ Measure length, volume of liquid and time in standard measures using simple measuring equipment. 	<ul style="list-style-type: none"> □ Gather, record, classify and present data in a variety of ways to help in answering questions □ Identify differences, similarities or changes related to simple scientific ideas and processes □ Record findings using keys, bar charts, and tables □ Use results to suggest improvements and raise further questions 	<p><u>Plants (Year B)</u></p> <ul style="list-style-type: none"> □ Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers □ Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant □ Investigate the way in which water is transported within plants □ Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal 			<p><u>Rocks (Year A)</u></p> <ul style="list-style-type: none"> □ Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties □ Describe in simple terms how fossils are formed when things that have lived are trapped within rock □ Recognise that soils are made from rocks and organic matter 	
<ul style="list-style-type: none"> □ Plan out how to perform a task, varying one factor while keeping others the same. 	<ul style="list-style-type: none"> □ Show in the way they perform their tasks how to vary one factor while keeping others the same. 	<ul style="list-style-type: none"> □ Lead a group to communicate findings to the rest of the class, using a variety of resources. 					



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National Curriculum Requirements – Lower Key stage 2 Pupils should be taught:

- Ask relevant questions and using different types of scientific enquiries to answer them
- Set up simple practical enquiries, comparative and fair tests
- Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Gather, record, classify and present data in a variety of ways to help in answer questions
- Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Identify differences, similarities or changes related to simple scientific ideas and processes
- Use straightforward scientific evidence to answer questions or to support their findings.



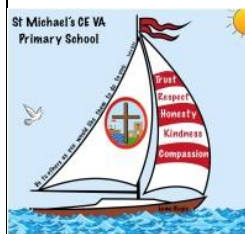
Programme of study - National Curriculum Requirements stated below in the knowledge section.

Progression in Science

Focus in...

Autumn term Spring term Summer term

		Working Scientifically			Knowledge		
		Planning and Predicting	Investigating and Observing	Recording, Analysing and Evaluating	Biology	Chemistry	Physics
Lower Key Stage 2	Year 4	<ul style="list-style-type: none"> <input type="checkbox"/> Ask relevant questions and use different types of scientific enquiries to answer them <input type="checkbox"/> Put forward ideas about testing and make predictions. 	<ul style="list-style-type: none"> <input type="checkbox"/> Make systematic and careful observations <input type="checkbox"/> With help, carry out a fair test, recognising and explaining why it is fair. 	<ul style="list-style-type: none"> <input type="checkbox"/> Gather, record, classify and present data in a variety of ways to help in answering questions <input type="checkbox"/> Record findings using simple scientific language, drawings, labelled diagrams. <input type="checkbox"/> Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions <input type="checkbox"/> Use results to draw simple conclusions 			<u>Electricity (Year B)</u> <ul style="list-style-type: none"> <input type="checkbox"/> Identify common appliances that run on electricity <input type="checkbox"/> Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery <input type="checkbox"/> Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit <input type="checkbox"/> Recognise some common conductors and insulators, and associate metals with being good conductors
		<ul style="list-style-type: none"> <input type="checkbox"/> Decide on an appropriate approach in their own investigations to answer questions. <input type="checkbox"/> Set up simple practical enquiries, comparative and fair tests 		<ul style="list-style-type: none"> <input type="checkbox"/> Use results to make predictions for new values, suggest improvements and raise further questions <input type="checkbox"/> Record findings using keys, bar charts, and tables 	<u>Living things and their habitats (Year B)</u> <ul style="list-style-type: none"> <input type="checkbox"/> Recognise that living things can be grouped in a variety of ways <input type="checkbox"/> Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment <input type="checkbox"/> Recognise that environments can change and that this can sometimes pose dangers and have an impact on living things 	<u>States of matter (Year B)</u> <ul style="list-style-type: none"> <input type="checkbox"/> Compare and group materials together, according to whether they are solids, liquids or gases <input type="checkbox"/> Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) 	<u>Sound (Year C)</u> <ul style="list-style-type: none"> <input type="checkbox"/> Identify how sounds are made, associating some of them with something vibrating <input type="checkbox"/> Recognise that vibrations from sounds travel through a medium to the ear <input type="checkbox"/> Find patterns between the pitch of a sound and features of the object that produced it <input type="checkbox"/> Find patterns between the volume of a sound and the strength of the vibrations that produced it <input type="checkbox"/> Recognise that sounds get fainter as the distance from the sound source increases
		<ul style="list-style-type: none"> <input type="checkbox"/> Recognise why it is important to collect data to answer questions. 	<ul style="list-style-type: none"> <input type="checkbox"/> Take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers <input type="checkbox"/> Begin to think about why measurements of length should be repeated. <input type="checkbox"/> Explain which result should be chosen from a set of repeated results. 	<ul style="list-style-type: none"> <input type="checkbox"/> Explain what the evidence shows in a scientific way and whether it supports predictions. 	<u>Animals including humans (Year C)</u> <ul style="list-style-type: none"> <input type="checkbox"/> Describe the simple functions of the basic parts of the digestive system in humans <input type="checkbox"/> Identify the different types of teeth in humans and their simple functions <input type="checkbox"/> Construct and interpret a variety of food chains, identifying producers, predators and prey 	<ul style="list-style-type: none"> <input type="checkbox"/> Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature 	



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National Curriculum Requirements – Upper Key stage 2 Pupils should be taught:

- Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision, take repeat readings when appropriate
- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- Use test results to make predictions to set up further comparative and fair tests
- Report and present 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
- Identify scientific evidence that has been used to support or refute ideas or arguments.

Programme of study - National Curriculum Requirements stated below in the knowledge section.

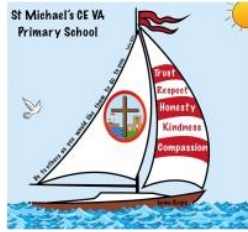


Progression in Science

Focus in...

Autumn term Spring term Summer term

Upper Key Stage 2	Year 5	Working Scientifically			Knowledge		
		Planning and Predicting	Investigating and Observing	Recording, Analysing and Evaluating	Biology	Chemistry	Physics
		<ul style="list-style-type: none"> <input type="checkbox"/> Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary <input type="checkbox"/> Make predictions based on scientific knowledge. <input type="checkbox"/> Suggest methods of testing including a fair test. <input type="checkbox"/> Suggest how to collect evidence. <input type="checkbox"/> Select suitable equipment. <input type="checkbox"/> Explain predictions in writing using scientific knowledge. 	<ul style="list-style-type: none"> <input type="checkbox"/> Carry out a fair test, explaining why it is fair. <input type="checkbox"/> Select information from provided sources. <input type="checkbox"/> Use averages to gain one representative result from a set of repeated results 	<ul style="list-style-type: none"> <input type="checkbox"/> Communicate findings in a variety of ways. <input type="checkbox"/> Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs, whilst making appropriate use of ICT <input type="checkbox"/> Draw conclusions and communicate them in appropriate scientific language. <input type="checkbox"/> Report and present 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 <input type="checkbox"/> Suggest improvements in their work, giving reasons. 		<p style="text-align: center;"><u>Materials (Year B)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets <input type="checkbox"/> Recognise that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution <input type="checkbox"/> Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating <input type="checkbox"/> Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic <input type="checkbox"/> Demonstrate that dissolving, mixing and changes of state are reversible changes <input type="checkbox"/> Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda 	<p style="text-align: center;"><u>Earth and Space (Year A)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system <input type="checkbox"/> Describe the movement of the Moon relative to the Earth <input type="checkbox"/> Describe the Sun, Earth and Moon as approximately spherical bodies <input type="checkbox"/> Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky
		<ul style="list-style-type: none"> <input type="checkbox"/> Recognise that scientific ideas are based on evidence and creative thinking. 	<ul style="list-style-type: none"> <input type="checkbox"/> Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate <input type="checkbox"/> Understand why observations and measurements need to be repeated. 	<ul style="list-style-type: none"> <input type="checkbox"/> Identify scientific evidence that has been used to support or refute ideas or arguments 	<p style="text-align: center;"><u>Living things and their habitats (Year B)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird <input type="checkbox"/> Describe the life process of reproduction in some plants and animals <p style="text-align: center;"><u>Animals including humans (Year C)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Describe the changes as humans develop to old age 	<p style="text-align: center;"><u>Forces and Magnets (Year A)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object <input type="checkbox"/> Identify the effects of air resistance, water resistance and friction, that act between moving surfaces <input type="checkbox"/> Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect <input type="checkbox"/> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird <input type="checkbox"/> Describe the life process of reproduction in some plants and animals 	



The school's Christian vision
 Our five core Christian values
Trust, Honesty, Compassion, Respect and Kindness
 are centred on



'Do to others as you would like them to do to you.' (Luke 6:13)

Through these values we inspire children to be the best they can be. Encouraging high aspirations and expectations that will allow them to achieve, explore, succeed and prepare for their own path through life.

St Michael's CE VA Primary School, Lyme Regis

National Curriculum Requirements – Upper Key stage 2 Pupils should be taught:

- Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision, take repeat readings when appropriate
- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- Use test results to make predictions to set up further comparative and fair tests
- Report and present 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
- Identify scientific evidence that has been used to support or refute ideas or arguments.



Programme of study - National Curriculum Requirements stated below in the knowledge section.

Progression in Science

Focus in...

Autumn term	Spring term	Summer term
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Upper Key Stage 2	Year 6	Working Scientifically			Knowledge	
		Planning and Predicting	Investigating and Observing	Recording, Analysing and Evaluating	Biology	Physics
		<ul style="list-style-type: none"> □ Plan different types of scientific enquiries to answer their own or others' questions, including recognising and controlling variables where necessary □ Make predictions based on scientific knowledge and understanding. □ Suggest methods of testing including a fair test and how to collect evidence, ensuring it is sufficient and appropriate. □ Explain predictions in writing using scientific knowledge and understanding. 	<ul style="list-style-type: none"> □ Carry out a fair test, identifying key factors to be considered. □ Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate □ Decide when observations and measurements need to be checked, by repeating, to give more reliable data. 	<ul style="list-style-type: none"> □ Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs, whilst making appropriate use of ICT. □ Identify trends and patterns and results that do not appear to fit the pattern. □ Draw conclusions and communicate them in appropriate scientific language. □ Report and present 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 □ Make practical suggestions for improving, methods in their work giving suggestions. 	<p><u>Electricity (Year B)</u></p> <ul style="list-style-type: none"> □ Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit □ Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches □ Use recognised symbols when representing a simple circuit in a diagram 	<p><u>Light (Year C)</u></p> <ul style="list-style-type: none"> □ Recognise that light appears to travel in straight lines □ Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye □ Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes □ Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them
<ul style="list-style-type: none"> □ Consider how scientists have combined evidence from observations and measurement with creative thinking to suggest new ideas and explanations for phenomena. 	<ul style="list-style-type: none"> □ Select information from a range of sources. □ Understand the difference in how to investigate quantitative and qualitative data. 	<ul style="list-style-type: none"> □ Provide explanations for differences in observations and measurements. □ Explain anomalous data with a variety of reasons. □ Show how interpretation of evidence leads to new ideas. 	<p><u>Living things and their habitats (Year B)</u></p> <ul style="list-style-type: none"> □ Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals □ Give reasons for classifying plants and animals based on specific characteristics 	<p><u>Evolution and inheritance (Year A)</u></p> <ul style="list-style-type: none"> □ Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago □ Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents □ Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution 		
		<ul style="list-style-type: none"> □ Use test results to make predictions to set up further comparative and fair tests Describe and evaluate their own and other people's scientific ideas related to topics in the national curriculum (including ideas that have changed over time), using evidence from a range of sources 	<p><u>Animals including humans (Year C)</u></p> <ul style="list-style-type: none"> □ Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood □ Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function □ Describe the ways in which nutrients and water are transported within animals, including humans 			