At St Michael's, we believe that high-quality Science lessons develop curiosity, enquiring minds and help the children to question and investigate as Scientists."					
	EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Plants (Biology)	I know about the similarities and differences living things. I know how to make observations of plants and explain why some things occur and talk about changes.	I know how to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. I know how to identify and name the petals, stem, leaves and root of a plant. I know how to identify and name the roots, trunk, branches and leaves of a tree.	I know how to observe and describe how seeds and bulbs grow into mature plants. I know how to find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	I know how to identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. I know what different plants need to help them to survive. I know how to investigate the way in which water is transported within plants. I know the life cycle of flowering plants, especially the importance of flowers.	I know how to recognise that living things can be grouped in a variety of ways. (Y4 - Living things and their habitats) I know how to explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. (Y4 - Living things and their habitats) I know how to recognise that environments can change and that this can sometimes pose dangers to living things. (Y4 - Living things and their habitats)
Animals, including humans (Biology)	I know about similarities and differences in relation to living things. I know how to make observations of animals and explain	I know and can name a variety of animals including fish, amphibians, reptiles, birds and mammals. I know how to classify animals by what they eat (carnivore, herbivore and omnivore).	I know the basic stages in a life cycle for animals, including humans. I know what animals and humans need to survive.	I know about the importance of a nutritious, balanced diet. I know about the skeletal system of a human. I know about the muscular system of a human.	I know how to identify and name the parts of the human digestive system. I know the functions of the organs in the human digestive system. I know how to identify and know the different types of teeth in humans.

	why some things occur and talk about changes.	I know how to sort animals into categories (including fish, amphibians, reptiles, birds and mammals). I know how to sort living and non-living things. I know how to name the parts of the human body that I can see. I know how to link the correct part of the human body to each sense.	I know why exercise, a balanced diet and good hygiene are important for humans.	I know about the purpose of the skeleton in humans and animals.	I know the functions of different human teeth. I know how to use food chains to identify producers, predators and prey. I know how to construct food chains to identify producers, predators and prey.
Living things and their habitat (Biology)	I know about similarities and differences in relation living things. I know the features of my own immediate environment and how environments might vary from one another. I know how to make observations of animals and plants and explain why some things occur and talk about changes.	I know how to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. (Y1 - Plants) I know how to identify and describe the basic structure of a variety of common flowering plants, including trees. (Y1 - Plants) I know how to identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 - Animals including humans)	I know the difference between things that are living, dead, and things that have never been alive I know 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.	I know the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Y3 - Plants)	I know how to group living things in different ways. I know how to use classification keys to group, identify and name living things. I know how to create classification keys to group, identify and name living things (for others to use). I know how changes to an environment could endanger living things.

		I know how to identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 - Animals including humans) I know how to describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (Y1 – Animals, including humans) I know how to observe changes across the four seasons. (Y1 - Seasonal change)	I know how to construct food chains to identify producers, predators and prey.		
Everyday materials (Chemistry)	*I know about similarities and differences in relation to materials.*	*I know the difference between an object and the material it is made from.* *I know the materials that an object is made from.* *I know the difference between wood, plastic, glass, metal, water and rock.* *I know about the properties of everyday materials.* *I know how to group objects based on the materials they are made from.*	I know how to identify and name a range of materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard. I know why a material might or might not be used for a specific job. I know how materials can be changed by squashing, bending, twisting and stretching.		
Rocks (Chemistry)	*I know about similarities and*			I know how to compare and group rocks	Enrichment opportunities

	differences in relation to places and objects. *I know the features of my own immediate environment and how environments might vary from one another.* *I know how to talk about changes.*			based on their appearance and physical properties, giving a reason. I know how fossils are formed. I know how soil is made. I know about and can explain the difference between sedimentary, metamorphic and igneous rock.	
States of Matter (Chemistry)					I know how to group materials based on their state of matter (solid, liquid, gas). I know how some materials can change state. I know how to explore how materials change state. I know how to measure the temperature at which materials change state. I know about the water cycle. I know the part played by evaporation and condensation in the water cycle.
Seasonal Changes (Physics)	*I know about similarities and differences in relation to places, objects and living things.* *I can talk about the features of my*	*I know how to observe and talk about the changes in the seasons.* *I know the names of the seasons and know about the type of weather in each season.*			

	own immediate environment and how environments might vary from one another. *I know how to make observations of plants.* *I know why some things occur and know how to talk about changes.*				
Light (Physics)				I know what dark is (the absence of light). I know that light is needed in order to see. I know that light is reflected from a surface. I know how a shadow is formed and I know how to demonstrate this. I know how to explore shadow size and explain the changes. I know the danger of direct sunlight and describe how to keep protected.	
Forces and magnets (Physics)				I know about and can describe how objects move on different surfaces. I know how some forces require contact and some do not, giving examples.	

				I know about and can explain how objects attract and repel in relation to objects and other magnets. I know how to predict whether objects will be magnetic and carry out an enquiry to test this out. I know how magnets work. I know how to predict whether magnets will attract or repel and give a reason.	
Sound (Physics)					I know how sound is made. I know how sound travels from a source to our ears. I know how sounds are made, associating some of them with vibrating. I know the correlation between pitch and the object producing a sound. I know the correlation between the volume of a sound and the strength of the vibrations that produced it. I know what happens to a sound as it travels away from its source.
Electricity (Physics)					I know how identify and name appliances that require electricity to function.

					I know how to construct a series circuit. I know how to identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers). I know how to draw a circuit diagram. I know how to predict and test whether a lamp will light within a circuit. I know the function of a switch in a circuit. I know the difference between a conductor and an insulator; giving examples of each.
Working Scientifically Skills	*I can question why things happen. (CLL)* *I can use my senses to explore objects (Ch E L)* *I can compare quantities. (ELG M)* *I can confidently choose the resources (including technology) I need (ELG PSED, U of W)*	I can ask simple scientific questions. I can use simple equipment to make observations. I can carry out simple tests. I can identify and classify things. I can explain to others what I have found out. I know how to use simple data to answer questions.		I can ask relevant scientific questions. I can use observations and knowledge to answer scientific questions. I can set up a simple enquiry to explore a scientific question. I can set up a test to compare two things. I can set up a fair test and explain why it is fair. I can make careful and accurate observations, including the use of standard units. I can use equipment, including thermometers and data loggers to make measurements.	

	I can handle equipment and tools (ELG PD) *I can talk about ways to learn safely (ELG PD)* *I can draw and talk about what I explore and notice.* *I can talk about changes (ELG U of W)* *I can identify similarities and differences between myself and others, materials and living things (ELG U of W)* *I can answer how and what questions (ELG CLL)* *I can talk about how well my approach worked (C of L)* *I can take turns and listen to the ideas of others on how to do things (ELG PSED)*	Working Scientifically Skills: Ask Questions  Set up and perform a test  Observe and measure  Conclude 	I can gather, record, classify and present data in different ways to answer scientific questions. I can use diagrams, keys, bar charts and tables; using scientific language. I can use findings to report in different ways, including oral and written explanations and presentations. I can draw conclusions and suggest improvements. I can make a prediction with a reason. I can identify differences, similarities and changes related to an enquiry. Working Scientifically Skills: Ask Questions  Plan  Predict Set up and perform a test Observe and measure Record Report Conclude