



ST MICHAEL'S PRIMARY SCHOOL

SCIENCE



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	<p>What can I tell you about me?</p> <ul style="list-style-type: none"> • UTW – Talk about what they see using wide range of vocabulary 	<p>What colours do we see during autumn?</p> <ul style="list-style-type: none"> • UTW – Seasonal changes • UTW – Exploration of natural materials • UTW – Talk about what they see using wide range of vocabulary • UTW – Environment walks 	<p>What can I find out about winter?</p> <ul style="list-style-type: none"> • UTW – Seasonal changes • UTW – Exploration of natural materials • UTW – Talk about what they see using wide range of vocabulary • UTW – Environment walks • UTW – Hibernation • UTW – Explore collections of materials with similar properties 	<p>What new life do we see during spring?</p> <ul style="list-style-type: none"> • UTW – New life • UTW – Plant seeds and care for growing plants 	<p>What is a life cycle?</p> <ul style="list-style-type: none"> • UTW – Butterfly and frog lifecycle 	
Reception	<p>How do our bodies change?</p> <ul style="list-style-type: none"> • UTW – Talk about what they see using wide range of vocabulary 	<p>What is the difference between light and dark?</p> <ul style="list-style-type: none"> • UTW – Light and dark 	<p>How is weather different in polar regions?</p> <ul style="list-style-type: none"> • UTW – Explore the natural world around them • UTW – Recognise some environments that are different from the one in which they live • UTW – Understand the effect of changing seasons on the natural world around them 		<p>What are mini-beasts, and where do they live?</p> <ul style="list-style-type: none"> • UTW – Explore the natural world around them • UTW – Explain where a range of animals live. Describing habitats and some microhabitats. 	
Year 1	<p>What are the seasons?</p> <ul style="list-style-type: none"> • Observe changes across the four seasons. • Observe and describe weather associated with the seasons and how day length varies. 	<p>What is autumn?</p> <ul style="list-style-type: none"> • Observe changes across the four seasons. • Observe and describe weather associated with the seasons and how day length varies. 	<p>What is winter?</p> <ul style="list-style-type: none"> • Observe changes across the four seasons. • Observe and describe weather associated with the seasons and how day length varies. 	<p>What is spring?</p> <ul style="list-style-type: none"> • Observe changes across the four seasons. • Observe and describe weather associated with the seasons and how day length varies. 	<p>What is summer?</p> <ul style="list-style-type: none"> • Observe changes across the four seasons. • Observe and describe weather associated with the seasons and how day length varies. 	<p>How do the seasons compare?</p> <ul style="list-style-type: none"> • Observe changes across the four seasons. • Observe and describe weather associated with the seasons and how day length varies.
	<p>What are objects made from and how are they different?</p> <ul style="list-style-type: none"> • Distinguish between an object and the material from which it is made. • Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. • Describe the simple physical properties of a variety of everyday materials. • Compare and group together a variety of everyday materials on the basis of their simple physical properties. 		<p>How do humans and animals compare?</p> <ul style="list-style-type: none"> • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 		<p>What are the parts of a plant, and what do they do?</p> <ul style="list-style-type: none"> • Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. • Identify and describe the basic structure of a variety of common flowering plants, including trees. 	
Year 2	<p>How can we compare materials, and change the shapes of objects made from them?</p> <ul style="list-style-type: none"> • Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. 	<p>What do animals and humans need to grow and stay healthy?</p> <ul style="list-style-type: none"> • Notice that animals, including humans, have offspring which grow into adults. • Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. 	<p>What do living things need to survive?</p> <ul style="list-style-type: none"> • Explore and compare the differences between things that are living, dead, and things that have never been alive • Identify that most living things live in habitats to which they are 	<p>How do seeds and bulbs grow, and what do they need?</p> <ul style="list-style-type: none"> • Explore and compare the differences between things that are living, dead, and things that have never been alive • 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 		



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SCIENCE



	<ul style="list-style-type: none"> Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 			<p>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</p> <ul style="list-style-type: none"> Identify and name a variety of plants and animals in their habitats, including micro-habitats 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"> Identify and name a variety of plants and animals in their habitats, including micro-habitats 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 	
Year 3	<p>What can rocks, fossils and soil tell us about the Earth?</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. 	<p>Why do animals need food, and how do their bodies help them move?</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. 	<p>How do forces and magnets affect the way things move?</p> <ul style="list-style-type: none"> Compare how things move on different surfaces. Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing. 	<p>What is light, how does it help us see, and how are shadows formed?</p> <ul style="list-style-type: none"> Recognise that they need light in order to see things, and that dark is the absence of light. Notice that light is reflected from surfaces. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Recognise that shadows are formed when the light from a light source is blocked by an opaque object. Find patterns in the way that the size of shadows change. 	Great Science Share	<p>How do the parts of a plant help it grow, reproduce and survive?</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.
Year 4	<p>How do materials change state and affect the water cycle?</p> <ul style="list-style-type: none"> Compare and group materials together, according to whether they are solids, liquids or gases. 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). 	<p>How do sounds happen, travel and change?</p> <ul style="list-style-type: none"> Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it. 	<p>How does electricity flow in a circuit?</p> <ul style="list-style-type: none"> Identify common appliances that run on electricity. 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, 	<p>How can we group living things and what impact do changes to their habitats have?</p> <ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. 	Great Science Share	<p>How do animals, including humans, digest food and depend on each other in food chains?</p> <ul style="list-style-type: none"> Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions.



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SCIENCE



	<ul style="list-style-type: none"> Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. 	<ul style="list-style-type: none"> Find patterns between the volume of a sound and the strength of the vibrations that produced it. Recognise that sounds get fainter as the distance from the sound source increases. 	<p>based on whether or not the lamp is part of a complete loop with a battery.</p> <ul style="list-style-type: none"> Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. 	<ul style="list-style-type: none"> Recognise that environments can change and that this can sometimes pose dangers to living things. 		<ul style="list-style-type: none"> Construct and interpret a variety of food chains, identifying producers, predators and prey.
Year 5	<p>How do forces and simple machines affect the way things move?</p> <ul style="list-style-type: none"> Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 	<p>What are reversible and irreversible changes?</p> <ul style="list-style-type: none"> 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. Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution. Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Demonstrate that dissolving, mixing and changes of state are reversible changes. 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>How do the Earth, sun and moon move in relation to one another?</p> <ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and Moon as approximately spherical bodies. Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. 	<p>How do humans change over time?</p> <ul style="list-style-type: none"> Describe the changes as humans develop to old age. 	Great Science Share	<p>How do animals and plants grow and reproduce?</p> <ul style="list-style-type: none"> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals.
Year 6	<p>How does the circulatory system work, and how do lifestyle choices affect it?</p>	<p>How and why do we classify living things?</p>	<p>How can the components of a circuit affect the way it works?</p>	<p>What do fossils and adaptations tell us about evolution?</p>	Great Science Share	<p>How does light travel for us to see objects and shadows?</p>



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SCIENCE



	<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.	<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.	<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.	<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">• 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.
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