



Saint Michael Catholic Primary School

Science Progression Map 2025 – 2026



EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Understanding the World:/The Natural World 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.	I can name some common wild and garden plants, including deciduous and evergreen trees. I can discuss why some plants look different to others. I can name and describe the basic structure of a variety of common flowering plants, including trees. I can spot and name a variety of common animals. I can group animals according to what they eat. I can spot and name a variety of common animals that are carnivores, herbivores and omnivores. I can describe and compare the differences between a variety of common animals. I can name, draw and label the basic parts of the human body. I can say which part of the body is to do with each sense. I can tell the difference between an object and the material from which it is made. I can name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. I can describe some everyday materials. I can make groups of materials based on what they are like. I can explain changes through autumn, winter, spring and summer. I can describe the weather in autumn, winter, spring and summer and that the days get longer and shorter.	I can explain how seeds and bulbs grow into plants. I can describe how plants need water, light and a suitable temperature to grow and stay healthy. I can explain that animals, including humans, have babies which grow into adults. I can explain the needs of animals, including humans, for survival. I can explain the importance of exercise, eating healthily and keeping clean. I can say why I would choose a material for a particular job. I can explain how objects made from some materials can be changed. I can explain the differences between things that are living, dead and things that have never been alive. I can explain that most living things live in habitats which suit them and depend on each other. I can name some plants and animals in their habitats including micro-habitats. I can explain how animals get their food from plants and other animals using a simple food chain.	I can explain what different parts of flowering plants do. I can explore the requirements of plants for life and growth and how they vary from plant to plant. I can investigate the way in which water is transported within plants. I can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. I can 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. I can explain why humans and some other animals have skeletons and muscles. I can examine and do practical experiments on various types of rocks in order to group them on the basis of their appearance and simple physical properties. I can simply describe how fossils are formed when things that have lived are trapped within rock. I can explain that soils are made from rocks and organic matter. I can explain that I need light in order to see things and that dark is the absence of light. I can show that light is reflected from surfaces. I can explain that light from the sun can be dangerous and that there are ways to protect eyes. I can show how shadows are formed when the light from a light source is blocked by a solid object. I can show that there are patterns in the way that the size of shadows change. I can compare how things move on different surfaces. I can see that some forces need contact between two objects, but magnetic forces can act at a distance. I can observe how magnets attract or repel each other and attract some materials and not others. I can compare and group some materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. I can describe magnets as having two poles. I can predict whether two magnets will attract or repel each other, depending on which poles are facing.	I can show that living things can be grouped together in various ways. I can explore and use classification keys to help group, identify and name a variety of living things. I can explain that environments can change and that this sometimes means that living things are put in danger. I can explain some parts of the digestive system in humans. I can explain the different types of teeth in humans and what they do. I can describe and explain a variety of food chains, naming producers, predators and prey. I can group materials together, according to whether they are solids, liquids or gases including tricky ones like gels, foams, mists and pastes. I can demonstrate and explain 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). I can correctly talk about the part played by evaporation and condensation in the water cycle and can show a link between the rate of evaporation and temperature. I can explain how sounds are made, and show that some of them are linked to vibrations. I can explain that vibrations from sounds travel through a medium to the ear. I can find patterns between the pitch of a sound and features of the object that produced it. I can show that there is a pattern between the volume of a sound and the strength of the vibrations that produced it. I can show that sounds get fainter as the distance from the sound source increases I can talk about common appliances that run on electricity. I can construct and draw with labels a simple series electrical circuit which includes cells, wires, bulbs, switches and buzzers. I can predict if a lamp will light or not in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. I can explain that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. I can show that some materials are conductors and some are insulators, and can explain that metals are good conductors.	I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. I can describe how some animals and plants reproduce. I can 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. I can explain that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. I can use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. I can demonstrate that dissolving, mixing and changes of state are reversible changes. I can 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. I can describe the movement of the Earth, and other planets, relative to The Sun in the solar system. I can describe the movement of the Moon relative to the Earth. I can describe the Sun, Earth and Moon as approximately spherical Bodies. I can explain day and night and the apparent movement of the sun across the sky using the idea of the Earth's rotation. I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. I can demonstrate the effects of air resistance, water resistance and friction, that act between moving surfaces. I can show that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	I can describe how plants, animals and micro-organisms are classified into broad groups according to common observable characteristics and based on similarities and differences. I can give reasons for classifying plants and animals based on specific characteristics. I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. I can recognise the impact of diet, exercise, drugs and lifestyle on the way the body functions. I can describe the ways in which nutrients and water are transported within animals, including humans. I can explain that the kinds of living things that live on the earth now are different from those that inhabited the Earth millions of years ago and that fossils provide this information I can explain that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. I can give examples of how animals and plants are adapted to suit their environment in different ways and can explain that adaptation may lead to evolution. I can show that light appears to travel in straight lines. I can explain that light travels in straight lines and that objects are seen because they give out or reflect light into the eye. I can demonstrate and 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. I can demonstrate that light travels in straight lines to show why shadows have the same shape as the objects that cast them. I can show that the brightness of a lamp or the volume of a buzzer depends on the number and voltage of cells used in the circuit. I can 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. I can draw a diagram using recognised symbols to represent a simple circuit associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.

Knowledge

A Saint Michael's Scientist: Knows about the world around them; tests their hypotheses fairly; understands how to work scientifically.





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Working Scientifically (Skills)	Understanding the World:/The Natural World Explore the natural world around them, making observations and drawing pictures of animals and plants. Communication and Language/Listening, Attention and Understanding 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 conversations when engaged in back-and-forth exchanges with their teacher and peers.	I can ask questions and know they can be answered in different ways. I can make observations, sometimes using equipment. I can investigate. I can identify and classify by putting items into groups. I can use my observations and ideas to suggest answers to questions. I can collect and record data to help answer questions.	I can ask questions and know they can be answered in different ways. I can make observations, sometimes using equipment. I can investigate. I can identify and classify by putting items into groups. I can use my observations and ideas to suggest answers to questions. I can collect and record data to help answer questions.	I can ask questions and use different types of scientific enquiries to answer them. I can set up simple practical enquiries, make comparisons and conduct fair tests. I can make observations and take measurements using standard units, using a range of equipment, including thermometers and data loggers, I can gather, record, classify and present data in a variety of ways to help in answering questions. I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. I can report on findings from enquiries, including spoken and written explanations, displays or presentations of results and conclusions. I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. I can explain differences, similarities or changes related to simple scientific ideas and processes. I can use straightforward scientific evidence to answer questions or to support my findings.	I can ask questions and use different types of scientific enquiries to answer them. I can set up simple practical enquiries, make comparisons and conduct fair tests. I can make observations and take measurements using standard units, using a range of equipment, including thermometers and data loggers, I can gather, record, classify and present data in a variety of ways to help in answering questions. I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. I can report on findings from enquiries, including spoken and written explanations, displays or presentations of results and conclusions. I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. I can explain differences, similarities or changes related to simple scientific ideas and processes. I can use straightforward scientific evidence to answer questions or to support my findings.	I can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. I can use test results to make predictions to set up further comparative and fair tests. I can talk about and present findings from enquiries, including conclusions, causal relationships and explanations of how reliable the information is. I can identify scientific evidence that has been used to support or refute ideas or arguments.	I can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. I can use test results to make predictions to set up further comparative and fair tests. I can talk about and present findings from enquiries, including conclusions, causal relationships and explanations of how reliable the information is. I can identify scientific evidence that has been used to support or refute ideas or arguments.
	Key Vocabulary	Plants: Deciduous, Evergreen trees, Leaves, Flowers (blossom), Petals, Fruit, Roots, Bulb, Seed, Trunk, Branches, Stem Animals including humans: Fish, Reptiles, Mammals, Birds, Amphibians (+ examples of each) Herbivore, Omnivore, Carnivore, Leg, Arm, Elbow, Head, Ear, Nose, Back, Wings, Beak Everyday Materials: Wood, Plastic, Glass, Paper, Water, Metal, Rock, Hard, Soft, Bendy, Rough, Smooth Seasonal Changes: Summer, Spring, Autumn, Winter, Sun, Day, Moon, Night, Light, Dark	Living things and their Habitats: Living, Dead, Habitat, Energy, Food chain, Predator, Prey, Woodland, Pond, Desert Plants: Seeds, Bulbs, Water, Light, Temperature, Growth Animals including humans: Survival, Water, Air, Food, Adult, Baby, Offspring, Kitten, Calf, Puppy, Exercise, Hygiene Use of everyday materials: Hard, Soft, Stretchy, Stiff, Shiny, Dull, Rough, Smooth, Bendy, Waterproof, Absorbent, Opaque, Transparent, Brick, Paper, Fabrics, Squashing, Bending, Twisting, Stretchine Elastic. Foil	Plants: Air, Light, Water, Nutrients, Soil, Reproduction, Transportation, Dispersal, Pollination, Flower Animals including humans: Movement, Muscles, Bones, Skull, Nutrition, Skeletons Rocks: Fossils, Soils, Sandstone, Granite, Marble, Pumice, Crystals, Absorbent Light: Light, Shadows, Mirror, Reflective, Dark, Reflection Forces and magnets: Magnetic, Force, Contact, Attract, Repel, Friction, Poles, Push, Pull	Living things and their Habitats: Vertebrates, Fish, Amphibians, Reptiles, Bird, Offspring Invertebrates, Snails, Slugs, Worms, Spiders, Insects, Environment, Habitats Animals including humans: Mouth, Tongue, Teeth, Oesophagus, Stomach, Small Intestine, Large Intestine, Herbivore, Carnivore, Canine, Incisor, Molar States of Matter: Solid, Liquid, Gas, Evaporation, Condensation, Particles, Temperature, Freezing, Heating Sound: Volume, Vibration, Wave, Pitch, Tone, Speaker Electricity: Cells, Wires, Bulbs, Switches, Buzzers, Battery, Circuit, Series, Conductors. Insulators	Living things and their Habitats: Mammal, Reproduction, Insect, Amphibian, Bird, Offspring Animals including humans: Foetus, Embryo, Womb, Gestation, Baby, Toddler, Teenager, Elderly, Growth, Development, Puberty Properties and changes of Materials: Hardness, Solubility, Transparency, Conductivity, Magnetic, Filter, Evaporation, Dissolving, Mixing Earth and Space: Earth, Sun, Moon, Axis, Rotation, Day, Night, Phases of the Moon, star, constellation Forces: Air resistance, Water resistance, Friction, Gravity, Newton, Gears. Pulleys	Living things and their Habitats: Classification, Vertebrates, Invertebrates, Micro-organisms, Amphibians, Reptiles, Mammals, Insects Evolution and Inheritance: Fossils, adaptation, Evolution, Characteristics, Reproduction, Genetics Light: Refraction, Reflection, Light, Spectrum, Rainbow, Colour Electricity: Cells, Wires, Bulbs, Switches, Buzzers, Battery, Circuit, Series, Conductors, Insulators, Amps, Volts, Cell Animals including humans: Circulatory, Heart, Blood Vessels, Veins, Arteries, Oxygenated, Deoxygenated, Valve, Exercise, Respiration

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Plants: explore their own environment (school, park, home) and become familiar with the shrubbery e.g. trees, plants
Animals inc. humans: identify which animals we would find in our country and others.
Seasonal Changes: observe the changes in leaves on trees throughout the seasons.
Everyday materials: explore a range of materials and their suitability for different objects.

Living things and their habitats: explore habitats of different living things in the playground e.g. The Bug Hotel, the pond, birds' nests, trees.
Plants: children can grow their own plant to understand what it needs to survive.
Animals inc. humans: explore new foods to contribute to their own healthy and balanced diet.
Use of everyday materials: Look at interesting inventions and compare the same objects made from different materials. Explore new materials developed by **John Dunlop**, **Charles Macintosh** or **John McAdam**.

Plants: understand how water is transported by using food colouring and celery sticks. Investigate how conditions effect the healthy growth of plants.
Animals inc. humans: explore different skeletons of different animals to make comparisons between the different animal groups.
Rocks: explore the work undertaken by **Mary Anning** looking at fossils which have formed in rocks.
Light: understand how the absence of light creates shadows by drawing around their own on the playground.
Forces and Magnets: explore which forces are acting upon their everyday objects.

Living things and their habitats: explore the plants growing in their local environment and wider environment. Explore the impact that humans have had on the environment e.g. plastic pollution.
Animals inc. humans: explore different animals' teeth e.g. deer teeth, cats' teeth, human teeth.
States of matter: identify a range of materials in their everyday lives which change state due to changes in temperature e.g. butter, chocolate, water.
Sound: explore different musical instruments and the pitch each makes. Understand we can use different materials for soundproofing to minimise noises.
Electricity: identify how electricity has benefitted their lives. Classify which objects use electricity and have an awareness of alternate means of producing light before the invention of electricity.

Living things and their habitats: Explore the work of naturalists and animal behaviourists: **David Attenborough** and **Jane Goodall**.
Animals inc. humans: have knowledge of the different gestation periods of different animals.
Properties and changes of materials: identify everyday materials which change their state e.g. coffee granules when mixed with hot water, egg when fried or boiled, bread when toasted.
Earth and Space: discuss the famous Moon landings, the first black woman in Space (**Mae C Jemison**) and the work of scientists such as Ptolemy, Alhazen and Copernicus.
Forces: explore how scientists such as **Galileo Galilei** and **Isaac Newton** helped to develop the theory of gravitation.

Living things and their habitats: **Carl Linnaeus'** classification key.
Evolution and Inheritance: Discoveries made by **Charles Darwin** and **Alfred Wallace** on developing the theory of evolution. Explore different hybrids such as different breeds of dogs. Explore how different animals are struggling to cope in the world at present due to human impact.
Light: Looking at how light travels through everyday objects e.g. rainbows, bubbles. Create WW2 periscopes.
Electricity: **Thomas Edison**, major discoveries in electricity,
Animals inc. humans: The impact of drugs, diet and exercise on their physical and mental health.

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