Progression in Science at St Mark's C.E. Primary School

Plants:

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
look closely at similarities, differences, patterns and change	identify and name a variety of common wild and garden plants, including deciduous and evergreen trees	identify and name a variety of plants and animals in their habitats, including microhabitats	identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers		describe the life process of reproduction in some plants and animals	identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
know about similarities and differences in relation to places, objects, materials and living things.	identify and describe the basic structure of a variety of common flowering plants, including trees.	observe and describe how seeds and bulbs grow into mature plants	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			describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals

talk about the features of their own immediate environment and how environments might vary from one another.		find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	investigate the way in which water is transported within plants			
make observations of animals and plants and explain why some things occur, and talk about changes			explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.			

Animals Including Humans:

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
eat a healthy range of foodstuffs and understands need for variety in food.	identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	notice that animals, including humans, have offspring which grow into adults	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	describe the simple functions of the basic parts of the digestive system in humans	describe the changes as humans develop to old age.	identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood

shows some understanding that good practices with regard to exercise, eating, sleeping and hygiene can contribute to good health.	identify and name a variety of common animals that are carnivores, herbivores and omnivores	find out about and describe the basic needs of animals, including humans, for survival (water, food and air)	identify that humans and some other animals have skeletons and muscles for support, protection and movement.	identify the different types of teeth in humans and their simple functions		recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe.	describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.		construct and interpret a variety of food chains, identifying producers, predators and prey.		describe the ways in which nutrients and water are transported within animals, including humans.
	identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.					

Living Things And Their Habitats:

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Look closely at similarities, differences, patterns		explore and compare the differences between things that are living, dead, and things that have never been alive		recognise that living things can be grouped in a variety of ways	describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird	describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals
know about similarities and differences in relation to places, objects, materials and living things.		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		explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment	describe the life process of reproduction in some plants and animals	give reasons for classifying plants and animals based on specific characteristics.
talk about the features of their own immediate environment and		identify and name a variety of plants and animals in their habitats,		recognise that environments can change and that this can sometimes		recognise that living things produce offspring of the same kind,

how environments might vary from one another		including microhabitats		pose dangers to living things		but normally offspring vary and are not identical to their parents
make observations of animals and plants and explain why some things occur, and talk about changes		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.				identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution

Materials:

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
looks closely at similarities, differences, patterns and change.	distinguish between an object and the material from which it is made	identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	**Rocks** compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	**States of Matter** compare and group materials together, according to whether they are solids, liquids or gases	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	**Fossils** recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
know about similarities and differences in relation to places, objects, materials and living things.	identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock	find out how the shapes of solid objects made from some materials can be changed by squashing, bending,	**Rocks** describe in simple terms how fossils are formed when things that have lived are trapped within rock	**States of Matter** observe that some materials change state when they are heated or cooled, and measure or research the temperature at	know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution	

		twisting and stretching.		which this happens in degrees Celsius (°C)		
	describe the simple physical properties of a variety of everyday materials		**Rocks** recognise that soils are made from rocks and organic matter.	**States of Matter** identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating	
	compare and group together a variety of everyday materials on the basis of their simple physical properties.				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	

Light:

Year 3	Year 6
recognise that they need light in order to see things and that dark is the absence of light	recognise that light appears to travel in straight lines
notice that light is reflected from surfaces	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
recognise that light from the sun can be dangerous and that there are ways to protect their eyes	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
recognise that shadows are formed when the light from a light source is blocked by an opaque object	use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
find patterns in the way that the size of shadows change.	

Electricity

Year 4	Year 6
identify common appliances that run on electricity	associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit
construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers	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
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	use recognised symbols when representing a simple circuit in a diagram.
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	

Sound Year 4

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
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.

Seasonal Changes and Earth and Space:		
EYFS	**Year 1**	**Year 5**
look closely at similarities, differences and patterns	observe changes across the four seasons	describe the movement of the Earth, and other planets, relative to the Sun in the solar system
talk about the features of their own immediate environment and how environments might vary from one another	observe and describe weather associated with the seasons and how day length varies.	describe the movement of the Moon relative to the Earth
make observations of animals and plants and explain why some things occur, and talk about changes		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.

Forces:	
Year 3	**Year 5**
compare how things move on different surfaces	explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
notice that some forces need contact between two objects, but magnetic forces can act at a distance	identify the effects of air resistance, water resistance and friction, that act between moving surfaces
/observe how magnets attract or repel each other and attract some materials and not others	recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.
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.	