St Thomas' CE Junior and Infant School

'A JOURNEY IN FAITH, ARRIVING WITH HOPE.'

Curriculum Progression Document – Science

	Plants	Living things and their habitats	Animals, inc. humans	Materials	Seasonal Changes
EYFS	Explore the natural world around them, making observations and drawing pictures of plants.	Explore the natural world around them, making observations and drawing pictures of animals. 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.	Manage their own needs: personal hygiene. Know and talk about the different factors that support their overall health and wellbeing: - Regular physical activity - Healthy eating - Toothbrushing - Sensible amounts of 'screen time' - Having a good sleep routine - Being a safe pedestrian	Compare length, weight and capacity Understand some important processes and changes in states of matter.	Explore the natural world around them Describe what they see, hear and feel while outside Understand the effect of changing seasons on the natural world around them. Understand some important processes and changes in the natural world around them, including the seasons
KS1	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. observe and describe how seeds and bulbs grow into mature plants	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,	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,	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	observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies identify a range of weather conditions and relate them to the changing seasons.

	find out and describe how plants need water, light and a suitable temperature to grow and stay healthy	and how they depend on each other identify and name a variety of plants and animals in their habitats, including microhabitats 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	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. 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.	compare and group together a variety of everyday materials on the basis of their simple physical properties. identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses investigate how the shapes of solid objects made from some materials can be changed	

	Plants	Living things and their habitats	Animals, inc. humans	Rocks	States of matter	Electricity	Light	Forces & Magnets	Sound
Lower KS2	identify and describe the functions of different parts of flowering plants: roots, stem/trunk,	recognise that living things can be grouped in a variety of ways	identify that animals, including humans, need the right types and amount	compare and group together different kinds of rocks on the basis of their	compare and group materials together, according to whether they are solids,	identify common appliances that run on electricity	recognise that they need light in order to see things and that dark is the absence of light	compare how things move on different surfaces notice that some forces need contact between two	identify how sounds are made, associating some of them with something vibrating

	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.	explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment recognise that environments can change and that this can sometimes pose dangers to living things	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 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	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	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) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	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 recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit	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 investigate how shadows are formed and find patterns in the way that shadows change	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	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

			construct and interpret a variety of food chains, identifying producers, predators and prey			recognise some common conductors and insulators, and associate metals with being good conductors.			

	Living things and their habitats	Animals inc. humans	Materials	Electricity	Forces	Evolution	Earth and Space	Light
Upper KS2	describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird describe the life process of reproduction in	identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood	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	associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit	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,	recognise that living things have changed over time and that fossils provide information about living things that inhabited the	describe the movement of the Earth, and other planets, relative to the Sun in the solar system describe the movement of the Moon	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

	some plants and animals 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 give reasons for classifying plants and animals based on specific characteristics	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 describe the changes as humans develop to old age	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 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,	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	that act between moving surfaces recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	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	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	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.

			including changes associated with burning and the action of acid on bicarbonate of soda					