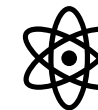


Science Subject Skeleton Overview
“The important thing is to never stop questioning.” *Albert Einstein*



Essential Knowledge

Science Overview						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Christian Values	FORGIVENESS		PERSEVERANCE		RESPECT	
	FRIENDSHIP	TRUTHFULNESS	WISDOM	COMPASSION	JUSTICE	RESPONSIBILITY
EYFS	The Natural World: - explore the natural world around them, making observations and drawing pictures of animals and plants. - 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.					
Y1	EVERYDAY MATERIALS Pupils will know: - Material is what an object is made from. - How to recognise different materials and name them. SEASONAL CHANGES Pupils will know: - The four seasons and the order they come in. - What the typical weather is like in the four seasons.		ANIMALS, INCLUDING HUMANS Pupils will know: - What different animals eat and that we label that carnivore, herbivore and omnivore. - The five senses are: sight, smell, touch, hearing and taste. SEASONAL CHANGES Pupils will know: - The four seasons and the order they come in. - What the typical weather is like in the four seasons.		PLANTS Pupils will know: - All trees and flowers are plants. - Basic structure of a flower and tree SEASONAL CHANGES Pupils will know: - The four seasons and the order they come in. - What the typical weather is like in the four seasons.	
Y2	USE OF EVERYDAY MATERIALS Pupils will know: *check pupils know Y1 knowledge - Why objects are made from certain materials.		ANIMALS, INCLUDING HUMANS Pupils will know: - That animals have offspring which grow into adults. - What basic needs animals have for survival (water, food and air). - How important eating the right amounts of different types of food is for humans.		LIVING THINGS AND THEIR HABITATS Pupils will know: How a habitat provides the basic needs of the animals that live there.	PLANTS Pupils will know: *check pupils know Y1 knowledge - What a plant needs to grow.
Y3	ROCKS AND SOIL Pupils will know: - All rocks are not the same. - How are fossils formed.	LIGHT Pupils will know: - Where light comes from. - What reflections are.	FORCES AND MAGNETS Pupils will know: - That magnets are objects that are capable of producing a magnetic field. - Magnets are metals that attract other metals.		PLANTS Pupils will know: What each part of a food plant does.	ANIMALS, INCLUDING HUMANS Pupils will know: How to eat a health balanced diet.

‘I know that there is nothing better for people than to be happy and to do good while they live.’ Ecclesiastes 3:12

Science at Holy Trinity CE Primary School

	That soil is the upper layer of earth	Shadows are formed because light can't pass through opaque objects	- Magnetic materials are always made of metal but not all metals are magnetic. - Materials that produce a magnetic field create a pushing or pulling force. - Same poles repel. - Different poles attract.	- What each part of a flowering plant does. - How seeds turn into plants.	- How our skeletons protect us and provide a frame. - How our muscles make us move and support us.
Y4	SOUND Pupils will know: <i>*check pupils already know that hearing is one of their 5 senses</i> - Sounds are made when objects vibrate. - The vibration makes the air around the object vibrate and the air vibrations enter your ear. You hear them as sounds.	ELECTRICITY Pupils will know: - Electrical energy is caused by electrons (the particles in atoms) moving about to make a current - In order for electricity to flow a circuit needs 3 things: - A source of electricity - No gaps in the circuit - Conductors - A conductor is a material that allows charges to flow easily throughout the material. - An insulator is a material that does not allow charges to flow easily throughout the material. - Electricity can be dangerous	LIVING THINGS AND THEIR HABITATS Pupils will know: <i>* check pupils know Y1 knowledge</i> - Animals can be put into 2 categories: - Vertebrates – animals with a backbone - Invertebrates – animals without a backbone - Plants can be grouped 2 ways (flowering and nonflowering)	ANIMALS, INCLUDING HUMANS Pupils will know: Digestive System - Digestion is the way the body breaks down the food we eat into smaller parts that can be used to give the body energy. Teeth - Carnivores and herbivores have different types of teeth, to suit the type of food they eat. Food Chains - A food chain is a diagram that shows a producer and consumers.	STATES OF MATTER Pupils will know: - Solids stay in one place and can be held. They do not flow like liquid. Solids always take up the same amount of space. They do not spread out like gases. - Liquids can flow or be poured easily. They are not easy to hold. Liquids can change their shape depending on the container they are in. - Gases are often invisible. Gases do keep their shape. They spread out and change their shape and volume to fill up whatever container they are in. - Some materials change state when they are heated or cooled

Y5	EARTH AND SPACE Pupils will know: - Names the 8 planets in our solar system in order. - The sun is a star. - The earth spins on its axis. It takes 24 hours to complete 1 rotation. - The Earth takes 365 $\frac{1}{4}$ days to travel around the sun. - During the winter, the North Pole is tilted away from the sun's rays. - During the summer the North Pole is tilted towards to sun's rays. - This tilt creates the seasons.	FORCES Pupils will know: *Check retention of Y3 vocab and essential knowledge before commencing Y5 unit - Forces are pushes and pulls in a particular direction. - Forces change the motion of an object. They will make it start to move or speed up, slow it down or even make it stop. - Friction is a force between two surfaces that are sliding, or trying to slide, across each other. - Friction always works in the direction opposite to the direction in which the object is moving, or trying to move. - Friction always slows a moving object down - The force that pulls things to the ground on Earth (and other planets) is called gravity	PROPERTIES AND CHANGES OF MATERIALS Pupils will know: *Check retention of Y4 vocab and essential knowledge before commencing Y5 unit - Different materials are used for particular jobs based on their properties. - Reversible changes can be 'undone'. - Irreversible changes cannot be 'undone'. - Materials that will dissolve are known as soluble. - Materials that won't dissolve are known as insoluble.		LIVING THINGS AND THEIR HABITATS Pupils will know: *Check retention of Y2 vocab and essential knowledge before commencing Y5 unit - A life cycle shows how things are born, how they grow and how they produce. - Reproduction: Living things create other living things. Animals have babies. Plants have seeds which turn into new plants.	ANIMALS, INCLUDING HUMANS Pupils will know: Puberty is the stage of development between childhood and adulthood. Changes happen inside and outside of the body during puberty. Physical growth occurs so that the body changes to that of an adult which enables reproduction.
Y6	ANIMALS INCLUDING HUMANS Pupils will know: *Check retention of Y4 vocab and essential knowledge on digestive system before commencing Y6 unit Circulatory System (the system that circulates blood through the body)	EVOLUTION AND INHERITANCE Pupils will know: - Evolution is the way that living things change over time - The winners were those that had characteristics that made them better adapted for survival. He (Darwin) noticed that living things were	LIGHT Pupils will know: *Check retention of Y3 vocab and essential knowledge before commencing Y6 unit Light travels in straight lines. When light hits an object, it is reflected (bounces off) and enters our eyes. This is how we see the object.	ELECTRICITY Pupils will know: - A series circuit has only one route for the current to take. - If just one part of this series circuit breaks, the circuit is broken and the flow of current stops. - More batteries or a higher voltage create	LIVING THINGS AND THEIR HABITATS Pupils will know: *Check retention of Y4 & Y5 vocab and essential knowledge before commencing Y6 unit - Scientists sort and group living things according to their similarities and differences. This is called classification. - Microorganisms are very tiny living things.	

- Deoxygenated blood flows into the heart from the body through the veins - This blood is pumped out to the lungs from the heart - Blood is then oxygenated in the lungs - The oxygenated blood is then pumped out of the heart to the organs of the body - The blood travels around the body delivering oxygen and nutrients to the organs Diet and lifestyle - Exercise can improve the health of a person by removing fatty deposits from the body.	more likely to reproduce and pass on their useful characteristics to their offspring. - Adaptation is when things evolve to overcome challenges in their environment. - Variation occurs to enable species to adapt and survive in their environment.	Rays of light travel from a light source Shadows are the shape as the objects which cast them because light travels in straight lines.	more power to flow through the circuit. - More buzzers or bulbs mean the power is shared by more components. - Symbols for electric circuits.	
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