St Joseph's Catholic Primary School
Science Long Term Plan

EYFS
Children will be able to; Due to the nature of the Early Years Foundation Stage topics, coverage and skills are not pre-planned. Learning opportunities come from children's abilities and interests. Guidance for skills are taken from the Development Matters Document under the heading 'Understanding the World'. What does this look like is the Foundation Stage? Children explore their own bodies and their senses. We learn to name the parts of the body and what we use them for. We learn about things such as animals and their homes, including pets, farm animals and wild animals. Children observe changes such as caterpillars turning into butterflies, the seasons changing, plants and flowers growing. They are supported to notice and talk about what is happening and why. We learn about being healthy, including eating a range of foods and taking part in exercise. We develop a sense of curiosity and exploration through a range of resources relating to our enquiries, e.g. magnets, magnifying glasses, things to smell and taste etc, and through the continuous provision areas such as sand, water, small world, construction etc.

KS1						
	Autumn		**Spring**		**Summer**	
Cycle A	Naming and grouping familiar animals **(ANIMALS INCLUDING HUMANS)**	Seasonal changes: autumn and winter **(SEASONAL CHANGES)**	Human body parts **(ANIMALS INCLUDING HUMANS)**	Identifying plants and their basic parts **(PLANTS)**	Seasonal changes: spring and summer **(SEASONAL CHANGES)**	Everyday Materials **(EVERYDAY MATERIALS)**
	Naming and grouping animals	Signs of autumn	Humans are animals	Plants around our school or home	Signs of spring	Everyday objects and materials
	Naming mammals	Weather in autumn	Body parts on the outside	Structure of a tree	Weather in spring	Materials for recycling
	Naming birds and reptiles	Signs of winter	Body parts on the inside	Naming trees	Signs of summer	Materials properties
	Naming fish and amphibians	Weather in winter	Body parts for our senses	Deciduous and evergreen trees	Weather in summer	Waterproof materials: plan and do

	Animal Structure What animals eat	Day length in winter	More about sight, smell and sound More about taste and touch	Structure of a flowering plant Common flowering plants Wildflowers	Day length in summer	Waterproof materials :review Transparent and opaque materials: plan and do Transparent and opaque materials : review
Cycle B	<u>Uses of every day materials</u> **(USES OF EVERYDAY MATERIALS)** Materials and their uses Suitable and unsuitable materials Where materials come from Absorbent materials Stretchy materials Changing shape: plan and do Changing shape: review	<u>Growing plants</u> **(PLANTS)** Plants from seeds Plants from bulbs What plants need to grow and stay healthy Plant health and growth Plants without water Plants without warmth Plants without light	<u>New life</u> **(ANIMALS INCLUDING HUMANS)** Young animals Growing up Animal life cycles Changes in animal life cycles The basic needs of animals	<u>Introduction to food chains</u> **(LIVING THINGS AND THEIR HABITAT)** How animals get food Introduction to food chains Roles within food chains Comparing food chains	<u>Living things and where they live</u> **(LIVING THINGS AND THEIR HABITAT)** Living or non-living Living things and movement Alive, dead and never alive Animal habitats Plant habitats Plants and animals in microhabitats Protecting microhabitats	<u>Healthy me</u> **(ANIMALS INCLUDING HUMANS)** Washing hands Brushing teeth The importance of exercise Different types of food Different amounts of food Food scientists Staying healthy

Lower KS2						
	Autumn		Spring		Summer	
Cycle A	Rocks and Soils **(ROCKS)**	Introduction to the human skeleton and muscles **(ANIMALS INCLUDING HUMANS)**	Simple forces including magnets **(FORCES ANG MAGNETS)**	Healthy eating **(ANIMALS INCLUDING HUMANS)**	What plants do and what they need **(PLANTS)**	Introduction to light and shadows **(LIGHT)**
	Introduction to rocks	The human skeleton: support	Different surfaces: plan	Making or finding food	What plants need: plan	Light and seeing
	The appearance of rocks	The human skeleton: protection	Different surfaces: do and review	Types of food	What plants need: do	Light sources
	Physical properties of rocks: hardness	Bone length plan and do	Contact forces	Amounts of food	The function of leaves	Protecting our eyes from the sun: plan
	Physical properties of rocks: permeability	Bone length: review	Magnetic force at a distance	Nutrition from food	The function of roots	Protecting our eyes from the sun: do and review
	Everyday uses of rocks	Animal skeletons	Different magnets and their parts	Different diets for different people	Plants without roots	Opaque, transparent and translucent
	Weathering and erosion of rocks	Animals without bones	Magnetic and non-magnetic materials		Pollination	Making shadows
	How fossils are formed	Muscles for movement	Putting magnets together: attract or repel		Seed formation and seed dispersal	
			Blocking magnetic force		Life cycle of a flowering plant	

Cycle B	Introduction to the human digestive system **(ANIMALS INCLUDING HUMANS)**	Introduction to states of matter and changing states **(STATES OF MATTER)**	Simple electrical circuits **(ELECTRICITY)**	Introduction to sound **(SOUND)**	Living things and the environment **(LIVING THINGS AND THEIR HABITAT)**	More about food chains **(ANIMALS INCLUDING HUMANS)**
	Types of teeth	Properties of solids, liquids and gases	Electrical appliances	How are sounds made	Introducing observable characteristics	Simple food chains
	The functions of teeth					
	Different teeth for different food	Comparing and grouping solids, liquids and gases	Components in a simple circuit	How vibrations travel	Grouping Animals	Producers in a food chain
	The human digestive system	Changing state: solid to liquid	Building simple circuits	Vibrations and solid materials	Grouping Plants	Consumers in a food chain
	More about the journey of food	Changing state: liquid to solid	Switches	Louder and quieter sounds	Classification keys	Predators and prey in a food chain
	Presenting the human digestive system	Melting temperatures: research	Electrical conductors and insulators	Sound insulation	Classification keys to identify animals	Creating food chains
		Changing state: liquid to gas	Working with electricity	Higher and lower sounds	Classification keys to identify plants	Presenting food chains
		Changing state: gas to liquid			Environments and seasonal changes	

Upper KS2						
	Autumn		Spring		Summer	
Cycle A	Properties, changes and separating materials **(PROPERTIES AND CHANGES OF MATERIALS)**	Forces including simple machines **(FORCES)**	Earth, Sun and Moon **(EARTH AND SPACE)**	Reproduction and life cycles: animals **(LIVING THINGS AND THEIR HABITAT)**	Reproduction and life cycles: plants **(LIVING THINGS AND THEIR HABITAT)**	Human Development **(ANIMALS INCLUDING HUMANS)**
	Properties of materials	Introduction to gravity	The shape of Earth The shape of objects in space	Animal groups	Asexual reproduction in plants	Changes in humans before and after birth
	Uses of everyday materials	Pushes and pulls	Observing the moon	Mammal life cycles	Plants from cuttings	Changes in childhood
	Everyday uses of thermal insulators	Friction: plan	Why we have day and night	Bird life cycles	Parts of a flowering plant and what they do	Changes during puberty
	Soluble and insoluble	Friction: do and review	Why the Sun appears to move across the sky	Comparing the life cycle for mammals and birds	Plant life cycles	Changes in adulthood
	Recovering insoluble solids	Air resistance: plan	The movement of the planets around the sun	Amphibian life cycles	Plant reproduction from cuttings	Changes in old age
	Separating soluble solids from solutions	Air resistance: do and review	How we see the	Insect life cycles		Finding out about human height
	Reversible changes of state	How leavers can help us	Moon from Earth The movement of the Moon	Animal gestation periods		
		How pulleys can help us				

Cycle B	The human circulatory system (ANIMALS INCLUDING HUMANS)	Changing circuits (ELECTRICITY)	Keeping healthy (ANIMALS INCLUDING HUMANS)	Why we group and classify living things (LIVING THINGS AND THEIR HABITAT)	Evolution and inheritance (EVOLUTION AND INHERITANCE)	Light and how it travels (LIGHT)
	Function of the heart	Variables in electric circuits: plan	The impact of a balanced diet	Comparing characteristics of living things	What fossils can tell us about the past	How light travels Light enters our eyes
	Function of blood	Variables in electric circuits: do and review	Healthy heart rate	How and why we group animals	How living things have changed over time	Reflected light Changing the direction of light
	Function of blood vessels	Changing the volume of buzzers	Heart recovery rate	How and why we group plants	Offspring similar but not identical	Measuring reflected light: plan
	How nutrients and water are transported within humans	The position of switches: open and closed	Heart recovery time after exercise	Micro-organisms are living things	Inherited characteristics	Measuring reflected light: do and review
	The circulatory system in humans: plan	Electrical career	Healthy hearts	Grouping micro-organisms	Animal adaptations	How shadows form
	Circulatory system: do and review		Legal and illegal drugs	Carl Linnaeus and classification	Plant adaptations Evolution: evidence	Shadow shapes investigation