

Science LTP Whole school- Science is Taught in 5 – 6 week blocks – 4 to 6 hours per week

Science Long Term Plan 2020/21 - Unit Overviews for Coverage								
	Autumn 1	Autumn 2		Spring 1	Spring 2 + Science Week	Summer 1	Summer 2	
FSU 1- * Science is ongoing though topic and provision.	Changes	Sparkle and Shine		Our Wonderful World	Once upon a time	Life as we Know it	We love adventures	
FSU 2- * Science is ongoing though topic and provision	Changes	Sparkle and Shine		Our Wonderful World	Once upon a time	Life as we Know it	We love adventures	
Year 1 Seasons ongoing	Sustainability Project See project planning for curriculum links	Super me - Science	Buildings- Geog/ History		What's it made of Part 1- Materials Science	Treasure Island- Geog TBC	Green fingers and Animals- Science	
Year 2 Seasons ongoing		The Earth Our Home- Science	What's it made of Part 2? Science Santa's sleigh? Xmas train		A Day in Life - Mining	Live and Let Live Geog Science-	A to B Coastal - 8 weeks - SATS Grace Darling topic 2 weeks - Geography Local study 4 weeks/ weeks Circus is Coming to Town	
Year 3		Animals and Humans objectives "How humans work?" - Science	Scavengers and Settlers - History	Light - Science	Magnets Science and DT? Levers	Geography unit - Earth as an Island- Rivers??? Visit Malham Cove?	Let's Plant It- Science	Riotious Romans- History
Year 4		Making the change (Science Objectives)	Active Planet- Volcanoes and mountains Geography Objectives (Inc Rocks Y3 obj)	DT Project Sewing	Temple, tombs and treasures-	Turn it up - sound Electricity- Science DT - robot with electrical component	All aboard/ Living together Hist/ Geog	Animal Life Science
Year 5		The Great the Bold and Brave - Ancient Greeks- History	Earth and Space Science		Earth as an island- Geog	Roots, shoots and fruits - Living things and their habitats. Science	Raiders or Traders - Vikings- History	States of Matter Title to be confirmed
Year 6		Existing, endangered, extinct - Science	Being Human- Science		Fairgrounds Science - electricity and light DT - fairgrounds	The History of the English Language	Journey to the Rainforest	
Whole School		<i>Halloween science home tasks</i>	<i>Christmas science home tasks</i>		Science week - Focus on working scientifically-recording results Whole school growing sunflowers Key Stage Humpty Dumpty competition <i>Join the wild challenge</i>		10 min science home tasks Wild challenge The Great Bug hunt	Summer science fun The great bug hunt

Autumn								
	FSU1	FSU 2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Methley Magic Sparkle and Shine		Super Humans	Earth Our Home	How Humans Work and Light	Making a Change	Earth and Space	Existing ,Endeared, Extinct Being human
Knowledge From NC/ EYFS	<p>Healthy eating/ exercise linked to how we have changed. How to look after our teeth and why they are important Naming body parts Scientists in the community doctors nurses, vets, opticians. Oral hygiene Where does food come from? Combine harvester visit?</p> <p>Food science- Making gingerbread, icing, melting chocolate</p> <p>Nocturnal Animals Light and dark Lights</p> <p>Food science- Baking bread, Making soup, melting chocolate...</p> <p>ONGOING SEASONS- AUTUMN focus</p>	<p>Sc1/2.2 Animals including humans Sc1/2.2d identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p> <p>Ongoing- Sc1/4.1 Seasonal Changes Sc1/4.1a observe changes across the 4 seasons Sc1/4.1b observe and describe weather associated with the seasons and how day length varies.</p>	<p>Sc2/2.1 Living things and their habitats Sc2/2.1a explore and compare the differences between things that are living, dead, and things that have never been alive Sc2/2.1b 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 Sc2/2.1c identify and name a variety of plants and animals in their habitats, including microhabitats Sc2/2.1d 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</p> <p>RECOVERY - Ongoing- Sc1/4.1 Seasonal Changes Sc1/4.1a observe changes across the 4 seasons Sc1/4.1b observe and describe weather associated with the seasons and how day length varies.</p>	<p>Sc3/2.2 Animals including humans Sc3/2.2a 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 Sc3/2.2b identify that humans and some other animals have skeletons and muscles for support, protection and movement</p> <p>Sc3/4.1 Light Sc3/4.1a recognise that they need light in order to see things and that dark is the absence of light Sc3/4.1b notice that light is reflected from surfaces Sc3/4.1c recognise that light from the sun can be dangerous and that there are ways to protect their eyes Sc3/4.1d recognise that shadows are formed when the light from a light source is blocked by a solid object Sc3/4.1e find patterns in the way that the size of shadows change.</p>	<p>Sc3/2.2 Animals including humans Sc3/2.2a 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 Sc3/2.2b identify that humans and some other animals have skeletons and muscles for support, protection and movement</p> <p>Sc3/4.1 Light Sc3/4.1a recognise that they need light in order to see things and that dark is the absence of light Sc3/4.1b notice that light is reflected from surfaces Sc3/4.1c recognise that light from the sun can be dangerous and that there are ways to protect their eyes Sc3/4.1d recognise that shadows are formed when the light from a light source is blocked by a solid object Sc3/4.1e find patterns in the way that the size of shadows change.</p>	<p>Sc4/3.1 States of Matter Sc4/3.1a compare and group materials together, according to whether they are solids, liquids or gases Sc4/3.1b 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) Sc4/3.1c identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p> <p>RECOVERY YEAR 3 – link to Active Planet Sc3/3.1 Rocks Sc3/3.1a compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Sc3/3.1b describe in simple terms how fossils are formed when things that have lived are trapped within rock Sc3/3.1c recognise that soils are made from rocks and organic matter.</p>	<p>Sc5/4.2 Forces Sc5/4.2a explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object Sc5/4.2b identify the effects of air resistance, water resistance and friction, that act between moving surfaces Sc5/4.2c recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect</p> <p>RECOVERY YEAR 3 - Sc3/4.2 Forces and Magnets Sc3/4.2a compare how things move on different surfaces Sc3/4.2b notice that some forces need contact between 2 objects, but magnetic forces</p> <p>Sc5/4.1 Earth and Space Sc5/4.1a describe the movement of the Earth, and other planets, relative to the Sun in the solar system Sc5/4.1b describe the movement of the Moon relative to the Earth Sc5/4.1c describe the Sun, Earth and Moon as approximately spherical bodies Sc5/4.1d use the idea of the Earth's rotation to explain day and night, and the apparent movement of the sun across the sky.</p>	<p>Sc6/2.3 Evolution Sc6/2.3a recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago Sc6/2.3b recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Sc6/2.3c identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> <p>Sc6/2.1 Living Things and their habitats Sc6/2.1a describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals Sc6/2.1b give reasons for classifying plants and animals based on specific characteristics.</p> <p>Sc6/2.2 Animals including humans Sc6/2.2a identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood Sc6/2.2b recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</p>

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Spring								
	FSU1	FSU 2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Our Wonderful word Once upon a time		What's it Made of Part 1	What's it Made of Part 2	Magnets	Bright Sparks	Roots, Shoots and Fruits	Fairgrounds
Knowledge From NC/ EYFS	<p>Toys- How they work. Battery operated, mechanical... Materials and purposes of toys. X Space Hibernation Winter animals and plants Eggs and life cycles Plants growth and change Washing and drying- in the spring weather- how can the three pigs dry their clothes? Dinosaurs and fossils Food science- fruit salad – linked to how things grow</p> <p>ONGOING: SEASONS Winter, Spring and Teeth</p>		<p>Sc1/3.1 Everyday materials Sc1/3.1a distinguish between an object and the material from which it is made Sc1/3.1b identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock Sc1/3.1c describe the simple physical properties of a variety of everyday materials Sc1/3.1d compare and group together a variety of everyday materials on the basis of their simple physical properties</p> <p>Ongoing- Sc1/4.1 Seasonal Changes Sc1/4.1a observe changes across the 4 seasons</p>	<p>Year 1 RECOVERY To be included Sc1/3.1 Everyday materials Sc1/3.1a distinguish between an object and the material from which it is made Sc1/3.1b identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock Sc1/3.1c describe the simple physical properties of a variety of everyday materials Sc1/3.1d compare and group together a variety of everyday materials on the basis of their simple physical properties</p> <p>Sc2/3.1 Uses of everyday materials</p>	<p>Sc3/4.2 Forces and Magnets Sc3/4.2a compare how things move on different surfaces Sc3/4.2b notice that some forces need contact between 2 objects, but magnetic forces can act at a distance Sc3/4.2c observe how magnets attract or repel each other and attract some materials and not others Sc3/4.2d 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 Sc3/4.2e describe magnets as having 2 poles</p>	<p>Sc4/4.2 Electricity Sc4/4.2a identify common appliances that run on electricity Sc4/4.2b construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers Sc4/4.2c 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 Sc4/4.2d recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p>	<p>Sc5/2.1 Living Things and their habitats Sc5/2.1a describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Sc5/2.1b describe the life process of reproduction in some plants and animals. Sc5/2.2 Animals, including humans Sc5/2.2a describe the changes as humans develop to old age</p>	<p>Sc6/4.1 Light Sc6/4.1a recognise that light appears to travel in straight lines Sc6/4.1b 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 Sc6/4.1c 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 Sc6/4.1d use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</p> <p>Sc6/4.2 Electricity Sc6/4.2a associate the brightness of a lamp or the volume of a buzzer with the</p>

		<p>Sc1/4.1b observe and describe weather associated with the seasons and how day length varies.</p>	<p>Sc2/3.1a identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for different uses</p> <p>Sc2/3.1b compare how things move on different surfaces.</p> <p>Sc2/3.1c find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</p> <p>RECOVERY - Ongoing-</p> <p>Sc1/4.1 Seasonal Changes</p> <p>Sc1/4.1a observe changes across the 4 seasons</p> <p>Sc1/4.1b observe and describe weather associated with the seasons and how day length varies.</p>	<p>Sc3/4.2f predict whether 2 magnets will attract or repel each other, depending on which poles are facing.</p>	<p>Sc4/4.2e recognise some common conductors and insulators, and associate metals with being good conductors.</p>		<p>number and voltage of cells used in the circuit</p> <p>Sc6/4.2b 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</p> <p>Sc6/4.2c use recognised symbols when representing a simple circuit in a diagram</p> <p>RECOVERY YEAR 4</p> <p>Sc4/4.2 Electricity</p> <p>Sc4/4.2a identify common appliances that run on electricity</p> <p>Sc4/4.2b construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</p> <p>Sc4/4.2c 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</p> <p>Sc4/4.2d recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <p>Sc4/4.2e recognise some common conductors and insulators, and associate metals with being good conductors.</p>
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Summer								
	FSU1	FSU 2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
IPC Unit	Life as we know it We love adventures		Green Fingers/ Super Animals	Live and Let Live	Let's Plant it	Turn It Up & Land Sea and Sky	Changes of State	Double Blocks in Autumn and Spring
Knowledge From NC/ EYFS	Minibeasts Habitats Life cycles Growing/changing/ plants Food science		Sc1/2.1 Plants Sc1/2.1a identify and name a variety of common wild and garden plants, including deciduous and evergreen trees	Sc2/2.3 Animals including humans Sc2/2.3a notice that animals, including humans, have offspring which grow into adults	Sc3/2.1 Plants Sc3/2.1a identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	Sc4/4.1 Sound Sc4/4.1a identify how sounds are made, associating some of them with something vibrating Sc4/4.1b recognise that vibrations from sounds	Sc5/3.1 Properties and Changes of Materials Sc5/3.1a compare and group together everyday materials on the basis of their properties, including their hardness, solubility,	

	<p>ONGOING SEASONS- SUMMER focus- Teeth</p>	<p>Sc1/2.1b identify and describe the basic structure of a variety of common flowering plants, including trees</p> <p>Animals inc Humans Sc1/2.2a identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammals Sc1/2.2b identify and name a variety of common animals that are carnivores, herbivores and omnivores Sc1/2.2c describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</p> <p>Ongoing- Sc1/4.1 Seasonal Changes Sc1/4.1a observe changes across the 4 seasons Sc1/4.1b observe and describe weather associated with the seasons and how day length varies.</p>	<p>Sc2/2.3b find out about and describe the basic needs of animals, including humans, for survival (water, food and air) Sc2/2.3c describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</p> <p>Sc2/2.2 Plants Sc2/2.2a observe and describe how seeds and bulbs grow into mature plants Sc2/2.2b find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p>RECOVERY - Ongoing- Sc1/4.1 Seasonal Changes Sc1/4.1a observe changes across the 4 seasons Sc1/4.1b observe and describe weather associated with the seasons and how day length varies.</p>	<p>Sc3/2.1b 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 Sc3/2.1c investigate the way in which water is transported within plants Sc3/2.1d explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p> <p>REVIEW AS COVERED AS HOME LEARNING Sc2/2.2 Plants Sc2/2.2a observe and describe how seeds and bulbs grow into mature plants Sc2/2.2b find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p>Sc3/3.1 Rocks Sc3/3.1a compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Sc3/3.1b describe in simple terms how fossils are formed when things that have lived are trapped within rock Sc3/3.1c recognise that soils are made from rocks and organic matter.</p>	<p>travel through a medium to the ear Sc4/4.1c find patterns between the pitch of a sound and features of the object that produced it Sc4/4.1d find patterns between the volume of a sound and the strength of the vibrations that produced it. Sc4/4.1e recognise that sounds get fainter as the distance from the sound source increases</p> <p>Sc4/2.1 All Living Things Sc4/2.1a recognise that living things can be grouped in a variety of ways Sc4/2.1b explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment Sc4/2.1c recognise that environments can change and that this can sometimes pose dangers to living things.</p> <p>Sc4/2.2 Animals including humans Sc4/2.2a describe the simple functions of the basic parts of the digestive system in humans Sc4/2.2b identify the different types of teeth in humans and their simple functions (Covered in Y3 so need to be recapped and revisited for deeper understanding) Sc4/2.2c construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p>transparency, conductivity (electrical and thermal), and response to magnets Sc5/3.1b know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution Sc5/3.1c use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating Sc5/3.1d give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Sc5/3.1e demonstrate that dissolving, mixing and changes of state are reversible changes Sc5/3.1f 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</p>	
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**For progressions of Working Scientifically skills and vocab see progression document and year group topic planning mats.