




**Warton St. Paul's Primary School
Science Curriculum Coverage Overview
2022-2023**

EYFS		Year 1	Year 2	Year 3/4 (Across Two Years)	Year 5	Year 6
 <p>Characteristics of Effective learning.</p> <p>Understanding the World Children in Reception Explore the natural world around them. Describe what they see, hear and feel when outside. Recognise some environments that are different to the one that they live in. Understand the effect of the changing season on the natural world around them.</p>	Working Scientifically	<ul style="list-style-type: none"> ask simple questions and recognising that they can be answered in different ways observe closely, using simple equipment <ul style="list-style-type: none"> perform simple tests identify and classify use their observations and ideas to suggest answers to questions gather and record data to help in answering questions 		<ul style="list-style-type: none"> ask relevant questions and using different types of scientific enquiries to answer them set up simple practical enquiries, comparative and fair tests make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers <ul style="list-style-type: none"> gather, record, classify and present data in a variety of ways to help in answering questions record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables <ul style="list-style-type: none"> report on findings from enquiries, 	<ul style="list-style-type: none"> plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs use test results to make predictions to set up further comparative and fair tests <ul style="list-style-type: none"> report and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms 	

			<p>including oral and written explanations, displays or presentations of results and conclusions</p> <ul style="list-style-type: none"> • use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identify differences, similarities or changes related to simple scientific ideas and processes • use straightforward scientific evidence to answer questions or to support their findings 	<p>such as displays and other presentations</p> <ul style="list-style-type: none"> • identify scientific evidence that has been used to support or refute ideas or arguments 	
	<p>Plants</p>	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • observe and describe how seeds and bulbs grow into mature plants • find out and describe how plants need water, light and a suitable temperature to grow and stay healthy 	<ul style="list-style-type: none"> • identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers <ul style="list-style-type: none"> • 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		
	Living things and their habitats		<ul style="list-style-type: none"> • compare living, dead and never alive • identify that most living things live in habitats to which they are suited, describe how different habitat provide the basic needs of different animals and plants, and how they depend on each other • identify and name a variety of plants and animals in their habitats, including microhabitats • describe how animals get food from plants/animals, use simple food chains, identify different sources of food. 	<ul style="list-style-type: none"> • recognise living things can be grouped in different ways • use classification keys to help group, identify and name living things in their local/wider environment • recognise environments can change and that this can sometimes pose dangers to living things. 	<ul style="list-style-type: none"> • describe the differences in the life cycles of a mammal, amphibian, insect and bird • describe the life process of reproduction in some plants and animals 	<ul style="list-style-type: none"> • describe how living things are classified into broad groups according to common observable characteristics, based on similarities and differences, including microorganisms, plants and animals • give reasons for classifying plants and animals based on specific characteristics.
	Animals including humans	<ul style="list-style-type: none"> • identify and name a variety of common animal including fish, amphibians, reptiles, birds and mammals • identify and name a variety of common animals that are carnivores, herbivores and omnivores 	<ul style="list-style-type: none"> • notice that animals, including humans, have offspring which grow into adults • describe the basic needs of animals, including humans, for survival (water food, air) • describe the importance for humans 	<ul style="list-style-type: none"> • identify that animals, including humans, need the right types/amount of nutrition, and can't make their own food; they get nutrition from what they eat • identify that humans and some other animals have skeletons and 	<ul style="list-style-type: none"> • identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood • recognise the impact of diet, exercise, drugs and 	

		<ul style="list-style-type: none"> describe and compare the structure of a variety of common animals (fish, amphibians, 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 	of exercise, eating the right amounts of different foods, & hygiene	<p>muscles for support, protection and movement</p> <ul style="list-style-type: none"> describe the simple functions of the digestive system in humans identify human teeth types and their simple functions <ul style="list-style-type: none"> construct and interpret a variety of food chains, identifying producers, predators and prey 	<p>lifestyle on the way their bodies function</p> <ul style="list-style-type: none"> describe the ways in which nutrients and water are transported within animals, including humans describe the changes as humans develop to old age 	
	Evolution and inheritance			<ul style="list-style-type: none"> compare and group different kinds of rocks by their 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. 		<ul style="list-style-type: none"> recognise that living things have changed over time and that fossils provide information about living things that inhabited the 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.
	Materials	<ul style="list-style-type: none"> distinguish between an object and the 	<ul style="list-style-type: none"> identify and compare the suitability of 	<ul style="list-style-type: none"> compare and group materials according 	<ul style="list-style-type: none"> compare & group everyday materials using 	

		<p>material from which it is made</p> <ul style="list-style-type: none"> • identify and name a variety of everyday materials, e.g. wood, plastic, glass, metal, water, rock • describe the simple physical properties of a variety of everyday materials • compare and group together a variety of everyday materials using simple physical properties. 	<p>everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <ul style="list-style-type: none"> • find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting, stretching. 	<p>to whether they are solids, liquids or gases</p> <ul style="list-style-type: none"> • observe that some materials change state when they are heated or cooled, measure or research the temperature this happens in °C • identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature 	<p>properties, e.g. hardness, solubility, transparency, conductivity (electrical & thermal), and response to magnets</p> <ul style="list-style-type: none"> • know that some materials dissolve in liquid to form a solution, describe how to recover the substance • use knowledge of solids, liquids and gases to decide how mixtures might be separated (filtering, sieving and evaporating) • give reasons, based on evidence from testing, for the particular uses of everyday materials e.g. 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; this kind of change is not usually reversible, e.g. burning and the action of acid on bicarbonate of soda. 	
	Light			<ul style="list-style-type: none"> • recognise that light is needed to see things, 		<ul style="list-style-type: none"> • recognise that light appears to travel in

				<p>and dark is the absence of light</p> <ul style="list-style-type: none"> • notice that light is reflected from surfaces • recognise light from the sun can be dangerous, and we can protect our eyes <ul style="list-style-type: none"> • recognise that shadows are formed when the light from a light source is blocked by an opaque object • find patterns in the way that the size of shadows change. 		<p>straight lines</p> <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • explain that we see things because light travels from light sources to our eyes or from light sources to objects, 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.
	Forces and magnets			<ul style="list-style-type: none"> • compare how things move on different surfaces <ul style="list-style-type: none"> • notice that some forces need contact between two objects, but magnetic forces can act at a distance <ul style="list-style-type: none"> • observe how magnets attract or repel each other and attract some materials and not others • compare & group everyday materials that are attracted to 		<ul style="list-style-type: none"> • 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, that act between moving surfaces • recognise that some mechanisms, including

				<p>a magnet, and identify some magnetic materials</p> <ul style="list-style-type: none"> • describe magnets as having two poles • predict whether 2 magnets will attract or repel each other, depending on which poles are facing each other 		<p>levers, pulleys and gears, allow a smaller force to have a greater effect</p>
	Sound			<ul style="list-style-type: none"> • identify how sounds are made, linking some of them with something vibrating • recognise that vibrations from sounds travel through a medium to the ear • find patterns between pitch and the 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 		
	Electricity			<ul style="list-style-type: none"> • identify common appliances that run on electricity • construct a simple 		<ul style="list-style-type: none"> • associate the brightness of a lamp or the volume of a buzzer with the

				<p>series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</p> <ul style="list-style-type: none"> • identify if 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 <ul style="list-style-type: none"> • 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 being good conductors. 		<p>number and voltage of cells used in the circuit</p> <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • use recognised symbols when representing a simple circuit in a diagram.
	Seasonal changes, Earth and Space		<ul style="list-style-type: none"> • observe changes across the four seasons • observe & describe weather associated with the seasons and how day length varies. 			