

Science Curriculum Overview 2021/22

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1 Blue text = working scientifically objectives	<u>Seasonal changes</u> - Observe changes across the four seasons (this will be threaded through the year) - Observe and describe weather and day length. - Make tables and charts about the weather.	<u>Seasonal changes</u> - Observe changes across the four seasons (this will be threaded through the year) - Observe and describe weather and day length. - Make tables and charts about the weather.	<u>Everyday materials</u> - Describe the simple physical properties of everyday materials. - distinguish between an object and the material it is made from - identify and name a variety of everyday materials including wood, plastic, glass metal water and rock - compare and group together a variety of everyday materials on the basis of their simple physical properties - Perform simple tests to explore questions eg What's the best material for an umbrella?	<u>Animals</u> - Name and identify a variety of animals inc. birds - Describe and compare structure of animals - compare and contrast animals at first hand (eg eggs hatching, chicks growing). /videos and photos - Make close observations of animals. (eg eggs hatching, chicks growing).	<u>Plants</u> - Identify and name common plants. - Describe structure of variety of common plants. - Observe closely with magnifying glasses. - Draw diagrams showing plant parts.	<u>Humans</u> - Name and identify a variety of animals including fish amphibians, reptiles, birds and mammals - Describe and compare structure of animals - identify, name, draw and label basic parts of human body and say which part of the body is associated with which sense - Name, draw and label basic parts of human body.
Year 2		<u>Everyday Materials</u> - Identify and compare suitability of a variety of everyday materials	<u>Animals inc. humans</u> - Notice animals inc human humans have	<u>Animals inc. humans</u> - Describe importance of exercise	<u>Living things and their habitats</u> - Compare differences between things that are	<u>Plants</u> - Observe and describe how seeds and bulbs grow

		<ul style="list-style-type: none"> - Find out how some materials can change by squashing, bending, twisting and stretching - Compare uses of everyday materials around school with materials found in other places 	<p>offspring which grow into adults</p> <ul style="list-style-type: none"> - Describe basic needs of humans - Observe through video/first hand - Asking qus and finding answers to their qus 	<ul style="list-style-type: none"> - Observe through video/first hand - Asking qus and finding answers to their qus 	<p>living and dead</p> <ul style="list-style-type: none"> - Identify that most living things live in habitats - Identify and name a variety of plants and animals - Describe how animals obtain their food from plants - Sorting and classifying things and recording on charts - Construct simple food chain 	<ul style="list-style-type: none"> - Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy - observe and record the growth of a variety of plants - observe similar plants at different stages of growth - Set up a comparative test to show that plants need water and light to stay healthy
Year 3	<p><u>Forces & Magnets</u></p> <ul style="list-style-type: none"> - Compare how things move on different surfaces. - Notice that some forces need contact between two objects, but magnetic forces can act at a distance. - Observe how magnets attract or repel each other. - Describe magnets as having two poles. - Predict whether tow magnets will attract or repel each other. - Carry out tests to find out how far things move on different surfaces. 		<p><u>Rocks</u></p> <ul style="list-style-type: none"> - Compare and group together different kinds of rocks - Describe in simple terms how different fossils are formed - Recognise that soils are made from rocks and organic matter - Observing rocks and how they might have changed over time using microscopes - Explore how fossils are formed - Explore different soils and identify differences and similarities between them 	<p><u>Light</u></p> <ul style="list-style-type: none"> - Recognise that light is needed in order to see things. - Learn that shadows are formed when the light from a source is blocked by a solid object. - Find patterns in way the size of shadow changes - Recognise that light from the sun can be dangerous. - Notice that light is reflected from surfaces. - Look for patterns in what happens to shadows when the light source moves. 	<p><u>Plants</u></p> <ul style="list-style-type: none"> - Identify and describe the functions of flowering plants. - Explore requirements of plants for life and growth. - Investigate how water is transported in a plant. - Explore part flowers play in life cycle of flowering plants. - Compare effects of different factors on plant growth. Using results draw different conclusions. - Observe how water is transported in plants. 	<p><u>Animals inc. Humans</u></p> <p>Identify that animals, including humans, need the right types and amount of nutrition and that they cannot make their own food.</p> <p>Identify that humans and other animals have skeletons and muscles.</p> <ul style="list-style-type: none"> - Identify and group animals with and without skeletons. - Compare and contrast diets of different animals.

	- Sort materials into those that are magnetic and those that are not.					
Year 4	<p><u>Animals inc. Humans</u></p> <ul style="list-style-type: none"> - Describe the simple functions of the basic parts of the digestive system in humans - identify different parts of teeth - construct and interpret a variety of food chains - Comparing teeth of herbivores & carnivores - Draw & discuss ideas about digestive system, make models 	<p><u>States of Matter</u></p> <ul style="list-style-type: none"> - Compare and group materials together - Observe that some materials change states - Identify the part played by evaporation and condensation in water cycle - Grouping and classifying a variety of different materials - Research the temp at which materials change state - Observe and record evaporation over period of time 	<p><u>Living Things and their habitats</u></p> <ul style="list-style-type: none"> - Recognise that living things can be grouped in a variety of ways - 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 this sometimes pose dangers to living things - Using and making simple guides and keys to explore and identify local plants and animals 	<p><u>Sound</u></p> <ul style="list-style-type: none"> - Identify how sounds are made - Recognise vibrations from sound - Find vibrations between pitch and sound - Investigate pitch - Investigate volume - Recognise that sound get fainter - Find patterns in sounds that are made by different objects eg saucepan lids, elastic bands of different thickness - Make earmuffs from variety of materials to see which provides best insulation against sound - Make and play own instruments 		<p><u>Electricity</u></p> <ul style="list-style-type: none"> - Identify common appliances that run on electricity - Construct a simple series of electrical circuit - Identifying whether or not a lamp will light in a simple circuit - recognise that a switch open and closes a circuit - recognise some common conductors and insulators - observing patterns eg. bulbs get brighter if more cells added - metals tend to be conductors of electricity - some materials can and some cannot connect across a gap in a circuit
Year 5	<p><u>Earth & Space</u></p> <ul style="list-style-type: none"> - Describe the movement of the Earth, and other planets relative to the Sun - Describe the movement of the 			<p><u>Living Things & Habitats</u></p> <ul style="list-style-type: none"> - Describe differences in the life cycles of a mammal, amphibian, insect and bird - Describe the life process of 	<p><u>Forces</u></p> <ul style="list-style-type: none"> - Explain that unsupported objects fall towards the Earth because of gravity - identify effects of air 	<p><u>Properties and Changes of Materials</u></p> <ul style="list-style-type: none"> - Compare and group together everyday materials - Know that some

	<p>Moon relative to the Earth</p> <ul style="list-style-type: none"> - Describe the Sun, Earth and Moon as approx spherical bodies - Use idea of Earth's rotation to explain day and night - Comparing the time of day in different countries through internet link (Google Earth) - creating simple models of the solar system - creating simple shadow clocks and sundials 			<p>reproduction in some plants and animals</p> <ul style="list-style-type: none"> - observing and comparing life cycles in local environment and around the world - Grow new plants from different parts of the parent plant eg. seeds, stem, root cuttings, tubers, bulbs - Observe changes in an animal over time eg. hatching and rearing chicks <p><u>Animals inc Humans</u></p> <ul style="list-style-type: none"> - Describe the changes as humans develop to old age - Research gestation periods of other animals and comparing them to humans - finding out and recording length and mass of a baby as it grows 	<p>resistance, water resistance and friction</p> <ul style="list-style-type: none"> - recognise that some mechanisms inc levers, pulleys and gears allow a smaller force to have a greater effect - exploring falling paper cones/ cupcake cases - designing and making a variety of parachutes and carrying out fair tests - explore water resistance by making different types of boats 	<p>materials will dissolve in liquid to form a solution</p> <ul style="list-style-type: none"> - Use knowledge of solids, liquids and gases to decide how mixtures might be separated - Give reasons based on evidence from comparative and fair tests - Demonstrate that dissolving, mixing and changes of state are reversible changes - Explain that some changes result in formation of new materials - carrying out tests to answer questions - Compare materials to make a switch in a circuit - Compare and observe changes eg. burning different materials, baking bread/cakes - Discuss and research how chemical changes have an impact on our lives
<p>Year 6</p>		<p><u>Animals in Humans</u></p> <ul style="list-style-type: none"> - Identify and name the main parts of the human circulatory system - Recognise the impact of diet, exercise, drugs and lifestyle on the way 	<p><u>Evolution</u></p> <ul style="list-style-type: none"> - Recognise that living things have changed over time and that fossils provide information about living things 	<p><u>Living Things and their Habitats</u></p> <ul style="list-style-type: none"> - Describe how living things are classified - Give reasons for classifying plants and animals 	<p><u>Light</u></p> <ul style="list-style-type: none"> - Recognise that light appears to travel in straight lines - Use idea that light travels in straight lines to explain how objects are 	<p><u>Electricity</u></p> <ul style="list-style-type: none"> - Investigate how voltage of cells in a circuit affects the brightness of a lamp, volume of a buzzer - Compare and give

		<p>bodies function</p> <ul style="list-style-type: none"> - Describe the ways in which nutrients and water are transported within animals inc humans - Exploring the work of scientists about relationship between diet, exercise, drugs, lifestyle and health 	<p>that inhabited Earth millions of years ago</p> <ul style="list-style-type: none"> - Recognise that living things produce offspring of the same kind - Identify how animals and plants are adapted to suit their environment and that adaptation may lead to evolution - observing and raising qus about local animals and how they adapted to their local environment - Analyse the advantages and disadvantages of specific adaptations eg. being on 2 feet rather than 4, having a long or short beak etc 	<ul style="list-style-type: none"> - Using keys to identify some animals and plants - Research unfamiliar animals and plants and decide where they belong in the classification system 	<p>seen</p> <ul style="list-style-type: none"> - Explain that we see things because light travels from the light sources to our eyes - Understand how shadows are formed - Deciding where to place rear view mirrors on a car eg. design and make a periscope - Investigate relationship between light sources - Investigate rainbows, bubbles on a bar of soap, objects looking bent in the water 	<p>reasons for variations in how components function</p> <ul style="list-style-type: none"> - Use recognised symbols when representing a simple circuit in a diagram - Systematically identify the effect of changing one component at a time in a circuit - Designing and making a set of traffic lights, burglar alarm
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