

Science Curriculum Overview 2019/20

	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 	<ul style="list-style-type: none"> offspring which grow into adults - 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 	<ul style="list-style-type: none"> living and dead - 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> <ul style="list-style-type: none"> Identify that animals, including humans, need the right types and amount of nutrition and that they cannot make their own food. Identify that humans and other animals have skeletons and muscles. - 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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