



Science Curriculum Overview

Year Group		Autumn		Spring		Summer
1	Knowledge	<p>Ourselves Identify, name draw and Label the basic parts of the human body such as head, eyes, ears, mouth, nose, arms legs. Look at the human skeleton and discuss the function of why this important to our bodies. Senses- what the 5 senses are and what part of the body is associated with these. how our senses help us to see, hear, taste, touch and smell</p> <p>Materials Distinguish between an object and what it is made from. Name a variety of everyday materials including wood, plastic, and glass, metal. Describe simple properties of a variety of everyday materials.</p> <p>Light. To know the differences between light and dark and recognise various light sources.</p>	Knowledge	<p>Polar Adventure Identify and classify different polar animals. Sort animals that are birds fish and mammals and compare different features of these animals to sort into two groups Use different scientific vocabulary and compare different weather conditions.</p> <p>On safari Name and identify common vertebrates and invertebrates and the difference between each one, comparing difference between them and grouping. Observing closely at various invertebrates and drawing detailed drawings of their features. Identify and name a variety of common animals that are carnivore herbivores and omnivores</p>	Knowledge	<p>Treasure island Identify and name various plants and evergreen trees. Understand the basic structure of a plant. Compare the similarities and differences between different leaves. Describe and compare the structures of a fish with humans and other animals</p> <p>Holiday Understand the different seasons and describe the different weather conditions in each. Observing different weather conditions across the seasons. Understand the different clothing that would be used in the seasons and understand why . Describe different materials used for various objects eg wool for hat in winter</p>
	Skills	<p>To identify and sort Observe and measure Ask relevant questions Perform simple tests. Identify and classify. Record finding.</p>	Skills	<p>Plan and perform simple tests Record findings Observe and measure using own observation and ideas to answer questions. Use simple equipment to observe closely</p>	Skills	<p>Plan and perform simple tests Record findings Use simple equipment to observe closely Ask relevant questions</p>

2	Knowledge	<p>Materials Identify the suitability of different materials for different purposes. Describe how the shape of solid materials can be changed.</p> <p>Keeping Healthy Describe basic needs in order to stay healthy. Describe the importance of eating different food, exercise and hygiene in order to stay healthy</p>	Knowledge	<p>Move it Describe how the shape of solid materials can be changed.</p> <p>Miniworlds Understand that animals including humans have offspring that turn into adults. Describe basic needs. Difference between things that are living and dead. Describe how habitats are suited to different animals. Describe how they obtain their food.</p>	Knowledge	<p>Young gardeners Observe how seeds and bulbs grow over time. Describe how seeds and plants need water and light and think about what happens when you change these. Identify the suitability of different materials for different purposes.</p> <p>Little Masterchefs An accumulation of some scientific learning during KS1</p>
	Skills	<p>To use scientific vocabulary To observe closely To perform fair tests To identify and classify To use observations to suggests answers to questions To gather and record data to help in answering questions</p>	Skills	<p>To use scientific vocabulary To observe closely To perform fair tests To identify and classify To use observations to suggests answers to questions To gather and record data to help in answering questions.</p>	Skills	<p>To use scientific vocabulary To observe closely To perform fair tests To identify and classify To use observations to suggests answers to questions To gather and record data to help in answering questions</p>
3	Knowledge	<p>Magnets Observe the forces magnet produce</p> <p>To report and present findings from enquiry</p> <p>Explain the difference between a contact and a non-contact force</p>	Knowledge	<p>Space Observe and draw the moon and real life secondary sources Describe the appearance of the near and far side of the moon Investigate a model rocket to see what makes it work well <u>Light</u></p>	Knowledge	<p>Animals including humans Identify that humans and some other animals have skeletons and muscles for support, protection and movement. Identify that animals, including humans, need the right types and amount of nutrition, and that they</p>

	<p>Plan comparative and fair tests and collect accurate results</p> <p>Use the results of my tests to explain some properties of magnets</p> <p>Magnets Recognise that soils are made from rocks and organic matter.</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p>	<p>Notice that light is reflected from surfaces.</p> <p>Recognise that he/she needs light in order to see things and that dark is the absence of light.</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect eyes.</p> <p>Recognise that shadows are formed when the light from a light source is blocked by a solid object.</p> <p>Find patterns in the way that the size of shadows change.</p>	<p>cannot make their own food; they get nutrition from what they eat.</p> <p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. 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.</p> <p>Investigate the way in which water is transported within plants.</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>
	<p>Skills</p> <p>Observe the forces magnet produce</p> <p>To report and present findings from enquiry</p> <p>Explain the difference between a contact and a non-contact force</p> <p>Plan comparative and fair tests and collect accurate results</p> <p>Use the results of my tests to explain some properties of magnets</p> <p>To explore the different kinds of rocks and their properties</p>	<p>Skills</p> <p>Set up a fair test and explain why it is fair. I can make careful and accurate observations, including the use of standard units.</p> <p>Use findings to report in different ways, including oral and written explanations, presentation.</p> <p>Draw conclusions and suggest improvements.</p> <p>Make a prediction with a reason.</p> <p>Identify differences, similarities and changes related to an enquiry</p>	<p>Skills</p> <p>Explain the importance of a nutritious, balanced diet</p> <p>Explain how nutrients, water and oxygen are transported within animals and humans.</p> <p>Describe and explain the skeletal system of a human.</p> <p>Describe and explain the muscular system of a human.</p> <p>Describe the purpose of the skeleton in humans and animals.</p>

		<p>To collect and record data from observations and tests</p> <p>Compare and group rocks</p> <p>Test and describe properties of rocks</p> <p>Predict the best way to record and present results</p>		<p>Describe what dark is (the absence of light).</p> <p>Explain that light is needed in order to see</p> <p>Explain that light is reflected from a surface.</p> <p>Explain and demonstrate how a shadow is formed.</p> <p>Explore shadow size and explain.</p> <p>Explain the danger of direct sunlight and describe how to keep protected.</p>		<p>Describe the function of different parts of flowering plants and trees.</p> <p>Explore and describe the needs of different plants for survival.</p> <p>Explore and describe how water is transported within plants.</p> <p>Describe the plant life cycle, especially the importance of flowers.</p>
4	Knowledge	<p><u>Sound</u></p> <ul style="list-style-type: none"> -identify how sounds are made, associating some of them with something vibrating. -recognise that vibrations from sounds travel through a medium to the ear. -find patterns between pitch of a sound and 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. 	Knowledge	<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 that this can sometimes pose dangers and have an impact on living things. <p><u>Animals, including humans</u></p> <ul style="list-style-type: none"> -describe the simple functions of the basic parts of the digestive system in humans. 	Knowledge	<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 and naming its basic parts, including cells, wires, bulbs, switches and buzzers. -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. -recognise that a switch opens and closes circuits and associate this with whether or not a lamp lights in a simple series circuit. -recognise some common conductors

		<p><u>States of Matter</u></p> <ul style="list-style-type: none"> -compare and group materials together, according to whether they are solids, liquids or gases. -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. -identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. 		<ul style="list-style-type: none"> -identify the different types of teeth in humans and their simple functions. -construct and interpret a variety of food chains, identifying producers, predators and prey. 		<p>and insulators, and associate metals with being good conductors.</p>
	Skills	<p><u>Sound</u></p> <ul style="list-style-type: none"> -questioning -observations -investigations -fair testing -working scientifically -scientist research -skills of reading sounds waves <p><u>States of Matter</u></p> <ul style="list-style-type: none"> -questioning -observations -investigations -fair testing -working scientifically -scientist research -skills of using a thermometer 	Skills	<p><u>Living Things</u></p> <ul style="list-style-type: none"> -questioning -observations -investigations -fair testing -working scientifically -scientist research <p><u>Animals and their Habitats</u></p> <ul style="list-style-type: none"> -questioning -observations -investigations -fair testing -working scientifically -scientist research 	Skills	<p><u>Electricity</u></p> <ul style="list-style-type: none"> -questioning -observations -investigations -fair testing -working scientifically -understanding of circuits
5	Knowledge	<p><u>Forces</u></p> <p>Children will learn about gravity and</p>	Knowledge	<p><u>Properties and Changes of Materials</u></p>	Knowledge	<p><u>Living Things and their Habitats</u></p> <p>Children will learn about the life</p>

	<p>the effects of it. They will also develop a knowledge of different forces and the effects of them, including, air resistance, friction and water resistance. They will also learn about fair tests and how to conduct them. Children will learn to classify objects into four categories (lever, spring, pulley and gear). Children will conduct several experiments throughout this topic.</p>	<p>Children will explain the properties of a range of materials and explain what they are used for. They will learn how to separate mixtures and to use the correct scientific vocabulary. They look at how materials change and what makes them do so. Children will conduct several experiments throughout this topic.</p> <p><u>Earth and Space</u> Children will develop their knowledge of space and learn how the planets in our solar system are organised. They will also look at different models of the solar system (geocentric and heliocentric), marking similarities and differences between the two styles. Children will describe the movement of the moon, using simple models to explain their ideas. They will also explain how the Earth's movement causes day and night.</p>	<p>process of plants. They will learn how plants reproduce. Children will also learn about the life cycles of mammals in different habitats, as well as the life cycles of amphibians, insects and birds. They will learn about Jane Goodall and her work with chimpanzees.</p> <p><u>Animals including Humans</u> Children will be able to describe the changes in humans as they develop to old age. They will look closer at different life stages, starting at the development of babies in the first year up to adults in their old age. They will look at gestation periods of animals, reporting finding and giving explanations for the results.</p>
	<p>Skills Understand gravity and explain what makes objects fall to earth. Use a force meter to accurately measure a force. To know what unit of measurement forces are measured in. What a fair test is and how to plan for one. Make predictions before undergoing</p>	<p>Skills Observational skills to explain the properties of materials. Make accurate measurements and observations. Use the correct scientific vocabulary to match the task. To work safely when conducting an experiment. To know planets in the solar</p>	<p>Skills To know parts of a plant or flower. The classifications of animals, e.g. mammals, insects, amphibians and birds. To know what a life cycle is. Observing similarities and differences in the range of life cycles studied. Researching. To know the different stage of life.</p>

		<p>an experiment. Reflecting and reviewing their experiment, drawing conclusions from the data it provided.</p>		<p>system. To know the order they are in. Create questions relevant to the topic. How to create a fair test. Using a timeline to show the evolution of ideas. Describing similarities and differences of two models. Reviewing data on tables and charts. Researching their own questions.</p>		<p>To make comparisons within the different stages. To look at and read data presented to them.</p>
6	Knowledge	<p><u>Classifying Critters</u> *Classify living things into broad groups using common observable characteristics. *Give reasons for classification of plants and animals. *Use Linnaean system to classify species *Recount development of vaccination for small pox. <u>Let it Shine</u> *Light appears to travels in straight lines. *Understand objects give out or reflect light. *Explain how objects are seen using idea light travels in straight lines. *Explain how shadows are same shape as objects that cast them.</p>	Knowledge	<p><u>Electrifying</u> *Draw symbolic diagrams of circuits. *Understand link between number of components in a circuit /voltage input and output. *Explain how a circuit works. *Identify ways of varying outputs (bulb brightness / buzzer loudness) *Compare series and parallel circuits. *Identify working components in complex circuits with switches.</p>	Knowledge	<p><u>Staying Alive</u> *Identify parts of circulation system and their functions. *Recognise effects of exercise, diet and drugs (cigarettes) on way body functions. *Understand ways nutrients and water transported in animals <u>We are Evolving</u> * *Using inherited traits to create off spring * Animal features and adaptation to their environment *Change over time using fossil evidence. *Recognise living things produce offspring of same kind but not identical to parents *How animals /plants adapted to their environment. * How adaptation can lead to evolution.</p>

	<p>Skills</p> <p><u>Classifying Critters</u></p> <ul style="list-style-type: none"> *Using scientific vocabulary. * CLASSIFYING *Record information using/creating classification keys. *Researching a named scientist. *Observing /Record changes over time. *Making observational notes *Predict outcomes of experiments using original test results. Researching using secondary sources. <p><u>Let it Shine</u></p> <ul style="list-style-type: none"> * Using scientific vocabulary *Identify and control variables. *Take repeat readings and identify atypical results. * Pattern seeking *Record data using scientific diagrams. *Record data on a line graph. 	<p>Skills</p> <p><u>Electrifying</u></p> <ul style="list-style-type: none"> *Using scientific vocabulary *Record data using scientific diagrams and labelling. *Record data in tables. *Make comparisons. *Pattern seeking 	<p>Skills</p> <p><u>Staying Alive</u></p> <ul style="list-style-type: none"> *Using scientific vocabulary. *Take repeat readings and identify atypical results. *Interpret data provided in tables. *Re-present data shown in tables * Pattern seeking <p><u>We are Evolving</u></p> <ul style="list-style-type: none"> * Using scientific vocabulary *calculating possible combinations *Classifying by observable features. *Using inherited traits to create off spring Identifying change over time. *Research using secondary data.
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