

Summerfields Primary School Science Curriculum Overview

Our Ultimate End Goal:

Science is a key core subject of the curriculum. At Summerfields Primary School, we aim to create a sense of excitement and passion about the subject. Our children thoroughly enjoy their Science lessons, especially practical, investigative work. We believe it is important for teachers to develop pupils' curiosity, enjoyment, skills and a growing understanding of science knowledge through an approach whereby children raise questions and investigate the world in which they live. As well as teaching the foundational subject knowledge, we also teach our children key scientific enquiry skills. We encourage them to explain what is occurring, predict how things behave and analyse their findings. We want our children to remember their science lessons in our school, to cherish these memories and embrace the scientific opportunities they are presented with.

This is the National Curriculum Working Scientifically objectives. These are highlighted through the document in purple. This is to ensure teachers are teaching knowledge alongside skills.

Year 1 / 2 Working Scientifically






Asking simple questions and recognising that they can be answered in different ways ♣ observing closely, using simple equipment ♣ performing simple tests ♣ identifying and classifying ♣ using their observations and ideas to suggest answers to questions ♣ gathering and recording data to help in answering questions.

Year 3 / 4 Working Scientifically





Asking relevant questions and using different types of scientific enquiries to answer them ♣ setting up simple practical enquiries, comparative and fair tests ♣ making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers ♣ gathering, recording, classifying and presenting data in a variety of ways to help in answering questions ♣ recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables ♣ reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions ♣ using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions ♣ identifying differences, similarities or changes related to simple scientific ideas and processes ♣ using straightforward scientific evidence to answer questions or to support their findings.

Year 5/6 Working Scientifically











Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary ♣ taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate ♣ recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs ♣ using test results to make predictions to set up further comparative and fair tests ♣ reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations ♣ identifying scientific evidence that has been used to support or refute ideas or arguments.

Scientific Enquiry	Symbol
Comparative and fair testing	 Comparative/fair testing
Identify and classify	 Identifying, grouping and classifying
Observation over time	 Observation over time
Pattern Seeking	 Pattern-seeking
Research	 Research

Curriculum Coverage (NC)






Year Group	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Plants</p> 	<p>Natural world Explore the world around them making observations and drawings of plants.</p> <p>Natural world Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.</p> <p>Communication and language- express their ideas and feelings about their experiences using full sentences.</p>	<ul style="list-style-type: none"> Name common plants and describe the basic structure of flowering plants, including deciduous and evergreen. 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. 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. 	<p>Recognise that living things can be grouped in a variety of ways.</p> <p>(habitats)</p>	<p>Describe the differences in the lifecycles of a mammal, an amphibian, an insect and a bird.</p> <p>(Living things and habitats)</p>	<p>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.</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p> <p>(Living things and habitats)</p>

<p><u>Key vocabulary</u></p>	<p>Plant, leaf, stem, flower, grow, rain, sun, water, soil, seed,</p>	<p>Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud. Names of trees in local area, garden and wild flowering plants.</p>	<p>As year 1+ light, shade, sun, warm, cool, water, grow, healthy.</p>	<p>Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal- wind dispersal, animal dispersal, water dispersal, pollen, roots, stem, trunk, leaves, absorb, nutrients, reproduce, germination, stamen, style.</p>	<p>Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernatc.</p>	<p>Lifecycle, mammal, amphibian, germination, seed formation, insect, bird, pollination, life processes, plants, animals, reproduction, environment, dispersal, growth, living, eggs, and seeds.</p> <p>(living things and habitats)</p>	<p>Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering and non flowering.</p> <p>(living things and habitats)</p>
<p><u>Key indicators</u></p>	<ul style="list-style-type: none"> • Can plant seeds and care for growing plants. • Understand the basic features of a simple plant lifecycle. • Can name basic parts of a plant e.g. leaf, petal. 	<ul style="list-style-type: none"> • Can name trees and other plants they see regularly. • Can describe key features of the trees and plants e.g. shapes of leaves/colour of the flower/blossom. • Can point out trees which lost their leaves and those who keep them all year. Can point to and name parts of a plant. • Can use simple charts to sort. Can use photos to talk about how plants change. 	<ul style="list-style-type: none"> • Can describe how plants that have grown from seeds and bulbs have developed over time. • Can identify plants that grew well in different conditions. • Can spot similarities and differences between bulbs and seeds. • Can nurture seeds and bulbs into mature plants identifying the different requirements of different plants. 	<ul style="list-style-type: none"> • Can explain the function of the parts of a flowering plant. • Can describe the life cycle of flowering plants, including pollination, seed formation, seed dispersal and germination. • Can give different methods of pollination and seed dispersal, including examples. • Can explain observations made during investigations. • Can look at features of seeds to decide on method of dispersal. • Can draw and label a diagram of their created flowering plant to show its parts and their role and method of pollination and seed dispersal. 	<p>See living things and habitats.</p>	<p>See living things and habitats.</p>	<p>See living things and habitats.</p>


<p>Animals including humans.</p> 	<p>The Natural World Explore the natural world around them, making observations and drawing pictures of animals.</p> <p>Begin to make sense of their own life-story and family's history.</p> <p>Begin to understand the key features of the lifecycle of a plant and animal.</p> <p>People, culture and communities Describe their immediate environment using knowledge from observation, discussion, stories and non-fiction texts and maps.</p> <p>Personal, social and emotional development Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</p>	<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify and name a variety of common animals that are carnivores, herbivores and omnivores. 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</p>  	<p>Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>  	<p>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.</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p> 	<p>Describe the simple functions of the basic parts of the digestive system in humans. 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>  	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Describe the differences in the lifecycles of a mammal, an amphibian, an insect and a bird.</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Describe the life processes of reproduction in some plants and animals.</div> <p>(living things and habitats)</p> <p>Describe the changes as humans develop from birth to old age.</p> 	<p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</p> <p>Identify and name the main parts of the human circulatory system and describe the function of the heart, blood vessels and blood.</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans.</p> 
<p><u>Key vocabulary</u></p>	<p>Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves, heart,</p>	<p>Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves, reptile, amphibian, mammal, omnivore, carnivore, herbivore, all senses.</p>	<p>Offspring, grow, adults, nutrition, reproduce, survival, water, food, air, exercise, hygiene, survival, exercise.</p>	<p>Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, support, protect, skull, ribs, spine, muscles, joints.</p>	<p>Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, incisor, canine, herbivore, omnivore.</p>	<p>Puberty, vocabulary linked to describe a range of sexual characteristics.</p>	<p>Heart, pulse, rate, pumps, blood, blood vessel, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle.</p>

<p><u>Key indicators</u></p>	<p>Children can explore the natural world around them. They can describe what they see, feel and hear when outside. They can recognise environments which is different to the one they live in. They can talk about simple similarities and differences between living things. They can make simple observations about animals and explain why some things occur. They can explore basic lifecycles of animals.</p>	<p>Can name a range of animals which includes animals from each of the vertebrate groups. Can describe the key features of named animals. Can label key features on a picture/diagram. Can write descriptively about an animal. Can write a 'What am I?' riddle about an animal. Can describe what a range of animals eat. Can compare and classify animals.</p>	<p>Can sequence the stages of a baby. Observe these changes. Can describe how animals change as they get older. Develops understanding of how insects change (more than a butterfly) through lifecycle diagrams. Can explain what humans and other animals need to survive- this could be through planning a trip to the moon or desert Island. Can describe how to keep clean and healthy. Has a good understanding of the food plate and understands 'a healthy balanced diet'. Can create a diet for an athlete. Can adopt a menu to substitute food from the eat well plate. Understands the effect of exercise on the body.</p>	<p>Can name the nutrients found in food. Can state that to be healthy we need to eat the right types of food to give us the correct amount of these nutrients. Name some bones that make up the skeleton giving examples that support, help them move or provide protection. Can describe how muscles and joints help them to move. Classify food groups (high/low nutrients), answer q's about nutrients in food, use data to look for patterns. Give similarities and differences between skeletons.</p>	<p>Can sequence the main parts of the digestive system. Can draw the main parts of the digestive system onto a human outline. Can describe what happens in each part of the digestive system. Can point to three different types of teeth in their mouth and talk about what each is used for. Demonstrate journey of food through body. Make a dental record, Can explain teeth in animals and if they are carnivores, herbivores or omnivores.</p>	<p>Can explain the changes that takes place in boys and girls during puberty. Can explain how a baby changes physically as it grows and also what it is able to do.</p>	<p>Can draw a diagram of the circulatory system, label the parts and annotate it to show what the parts do. Can explain the positive and negative effects on diet, exercise, drugs and lifestyle on the body.</p>
<p>Living Things and their Habitats</p>	<p>People, culture and communities Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and maps.</p>	<ul style="list-style-type: none"> Name common plants and describe the basic structure of flowering plants, including trees. <p>(Plants)</p>	<p>Explore and compare the differences between things that are living, dead, and things that have never been alive. Identify that most living things live in habitats to which they are suited and describe how different habitats</p>	<p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>(Plants)</p>	<p>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 environment. Recognise that</p>	<p>Describe the differences in the lifecycles of a mammal, an amphibian, an insect and a bird. Describe the life processes of reproduction in some plants and animals.</p>	<p>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.</p>



	<p>Understanding the world Begin to understand the need to respect and care for the natural environment and all living things. Explore the natural world around them.</p> 	<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including</p> <p>(Animals including Humans)</p>	<p>provide for the basic needs of different kinds of 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 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>environments can change and that this can sometimes pose dangers to living things.</p>		<p>Give reasons for classifying plants and animals based on specific characteristics</p> 
<p>Evolution and Inheritance</p>							<p>Evolution and inheritance 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. Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</p> 
<p>Key Vocabulary</p>		<p>See Animals including Humans</p> <p>See Plants</p>	<p>Living, dead, never been alive, suited, suitable, basic need, food, food chain, shelter, move, feed, names of local habitats e.g. pond, woodland,</p>		<p>Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate.</p>	<p>Lifecycle, mammal, amphibian, germination, seed formation, insect, bird, pollination, life processes, plants, animals, reproduction,</p>	<p>Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering and non-flowering.</p>

			names of micro habitats e.g. under logs, in bushes etc.			environment, dispersal, growth, living, eggs, and seeds. Can dissect and label parts of flowering plant including male and female structures. Record finding as an annotated illustration of a flowering plant. Research and explain the life cycle and reproduction of a plant using scientific language.	Evolution Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils.
Key indicators	<p>Children will be able to explore the natural world and make observations. Children will recognise animal habitats.</p> <p>Children will understand how to look after animals and the environment including habitats.</p> <p>Children will begin to explore where they live and compare to other places in the world e.g. weather, climate.</p>		Find a range of items which are dead, living. Can name plants/animals which live in different habitats and micro habitat. Can talk about the features of the animal/plant and how they are suited to the habitat. Can talk about what the animal eats. Can construct a food chain.		Can name living things in a range of habitats, giving key features that helped identify them. Can give examples of how an environment may change both naturally and due to human impact. Can use classification keys to identify unknown plants and animals.	Can describe the lifecycles of mammals, amphibians and insects using diagrams. Can describe similarities and differences between them.	Can give examples of animals in the five vertebrate groups and some of the invertebrate groups. Can give key characteristics of the five vertebrate groups and some invertebrate groups. Can give examples of flowering and non-flowering plants. Can use classification keys to identify unknown plants and animals. Can create classification keys. Can give a number of characteristics that explain why an animal belongs to a particular group.

							<u>Evolution</u> Can explain the process of evolution. Can give examples of how plants and animals are suited to their environment. Can give examples of how an animal or plant has evolved over time e.g. penguin, peppered moth. Give examples of things that lived millions of years ago and the fossil evidence to support this.
Materials 	The Natural World Understand some important processes and changes in the natural world around them, including changing states of matter. Speaking Offer explanations for	Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. Describe the simple physical properties of a variety of everyday	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some	<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;"> Notice that some forces need contact between two objects, but magnetic forces can act at a distance. </div> <p style="text-align: center; color: red; margin-top: 5px;">(Forces and magnetism)</p>	STATES OF MATTER Compare and group materials together, according to whether they are solids, liquids or gases (states of matter) Observe that some materials change state when they are heated or cooled, and measure	Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets. Know that some	

Rocks and Soils



why things happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems where appropriate.

Understanding of the world

Use all their senses in hands on exploration of natural materials. Explore collections of materials with similar and/or different properties. Talk about what they see using a wide vocabulary. Explore how things work. Talk about the difference between materials and changes they notice.

materials. **Compare** and **group together** a variety of everyday materials on the basis of their simple physical properties.



materials can be changed by squashing, bending, twisting and stretching.



Rocks and Soils

Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.

Describe in simple terms how fossils are formed when things that have lived are trapped within a rock.

Recognise that soils are made from rocks and organic matter



or **research** the temperature at which this happens in degrees Celsius (States of matter) **Identify** the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. (states of matter)



materials will dissolve in liquid to form a solution, and **describe** how to recover a substance from a solution.

Use knowledge of solids, liquids gases to **decide** how mixtures might be separated, including through filtering, sieving and evaporating.

Give reasons, based on evidence from **comparative and fair tests**, for the particular uses of everyday materials, including 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 and this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.






(Evolution and Inheritance)

<p><u>Key Vocabulary</u></p>	<p>Wet, dry, shiny, dull, bendy, stiff, squashy, hard/soft, lumpy, wrinkly. Smooth, rough.</p>	<p>Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see through, not see through.</p>	<p>Names of materials: wood, plastic, glass, metal, water, rock, brick, paper, fabric, card, rubber, suitable/unsuitable, use/useful, hard/soft, stretchy/stiff. Rigid/flexible, waterproof/absorbent, strong/weak, rough/smooth, transparent/opaque, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching.</p>	<p>Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb, water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil.</p>	<p>Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle</p>	<p>Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/not reversible, change, burning, rusting, new material.</p>	
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<p><u>Key indicators</u></p>	<p>They can talk about simple similarities and differences between two materials and how materials change in terms of shape, size and texture. They can describe materials using basic scientific words. They can explore how things work. They can group and classify materials using their properties.</p>	<p>Can label a picture/diagram of an object made from different materials. Can describe the properties of materials. Can sort materials using their properties. Can test evidence to answer a question.</p>	<p>Can name an object, say what material it is made from, identify properties and make a link between property and use. Whilst changing a shape of an object can describe the actions used. Can use suitable vocabulary. Simple tests relevant to properties. Describe similarities and differences.</p>	<p>Can name some types of rock and give physical features of each. Can explain how a fossil is formed. Can explain that soils are made from rocks and also contain living/dead matter. Classify rocks in a range of ways using scientific vocabulary. Test properties of rocks. Show understanding of how fossils were formed, can identify plant/animal matter in soil, test water retention of soils.</p>	<p>Can create a concept map, including arrows linking the key vocabulary. Can name properties of solids, liquids and gases. Can give everyday examples of melting and freezing. Can give everyday examples of evaporation and condensation. Can describe the water cycle. Can give reasons to justify why something is a solid liquid or gas. Can give examples of things that melt/freeze and how their melting points vary From their observations, can give the melting points of some materials. Using their data, can explain what affects how quickly a solid melts. Can measure temperatures using a thermometer. Can explain why there is condensation on the inside the hot water cup but on the outside of the icy water cup From their data, can explain how to speed up or slow down evaporation. Can present their learning about the water cycle in a range of ways e.g. diagrams, explanation text, story of a water droplet.</p>	<p>Can explain everyday uses of material e.g. how bricks, wood, glass are used in buildings. Can explain what dissolving is, giving examples. Can name equipment used for filtering and sieving. Can use knowledge of liquids, gases and solids to suggest how materials can be recovered from solutions or mixtures by evaporation, filtering or sieving. Can describe simple reversible and non-reversible changes to materials, giving examples. Can create chart/table grouping materials using properties. Suggest appropriate material for purpose. Can explain results from investigations involving dissolving and non-reversible change.</p>	
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<p>Seasonal</p> 	<p>The Natural World Understand some important processes and changes in the natural world around them, including seasons.</p> 	<p>Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.</p>  		<p>Recognise that they need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces.</p>		<p>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p>(Forces)</p>	<p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the object that casts them.</p> <p>(Light)</p>
<p>Earth and Space</p> 				<p>Recognise that light from the sun can be dangerous and that there are ways to protect our eyes. Recognise that shadows are formed when the light source is blocked by a solid object. Find patterns in the way the size of the shadows change</p> <p>(Light)</p>		<p>Earth and Space Describe the movement of the Earth and other planets, relative to the sun in the solar system. Describe the movement of the moon relative to the Earth. Describe the Sun, Earth and Moon as approximately spherical bodies. Use Earth rotation to explain day and night due to the apparent movement of the sun across the sky.</p> 	
<p>Key vocabulary</p>	<p>Snow, wind, rain, sun, day, night, stormy, cloudy, hot, cold, foggy.</p>	<p>Weather (sunny, rainy, windy, snowy etc) Seasons (winter, summer, spring, autumn) sun, sunrise, sunset, Day length</p>		<p>Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous.</p> <p>(Light)</p>		<p>Earth, sun, moon, Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune, Pluto (dwarf planet), spherical, solar system, rotates, star, orbit, planets, axis, night, day, season, galaxy. Meteorite.</p>	<p>Year 3 vocabulary- Plus light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous.]</p> <p>(Light)</p>




Key indicators	<p>Can describe the weather outside and suggest what they might wear and what they might see. Can comment on the environment e.g. the leaves have fallen off the tree, there is a puddle. Children can understand the effect of changing seasons on the natural world around them.</p>	<p>Can name four seasons and identify when in the year they occur. Can observe and describe weather in different seasons. Can describe days being longer in summer and shorter in winter. Present data in tables charts and compare seasons.</p>		See Light		<p>Can show using diagrams the movement of the Earth and moon. Can explain the rotation of the Earth and how this causes night and day. Can explain evidence gathered about the position of shadows in terms of movement of the Earth. Can explain how a sundial works. Can explain why we have time zones.</p>	See Light
<p>Light and sound</p>	<p>Understanding of the world Explore materials with different properties. Talk about what they see, using a wide vocabulary.</p> <p>Expressive arts and design Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture form and function.</p> <p>Explore colour and colour-mixing.</p> <p>Play instruments with increasing control to</p>	<p>Describe the simple physical properties of a variety of everyday materials.] Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p> <p>(Materials)</p> <p>Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.</p> <p>(Seasonal changes)</p>	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> <p>(materials)</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p>(Plants)</p>	<p>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>(Plants)</p> <p>Recognise that they need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces. Recognise that light from the sun can be dangerous and that there are ways to protect our eyes. Recognise that shadows are formed when the</p>	<p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p> <p>(living things and habitats)</p> <p>SOUND To identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a</p>	<p>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets.</p> <p>(materials)</p> <p>Use Earth rotation to explain day and night due to the apparent movement of the sun across the sky.</p> <p>(Earth and Space)</p>	<p>Recognise that light travels in straight lines. 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. 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. Use the idea that light travels in straight lines to explain why shadows have the same shape as the object that casts them.</p>

	<p>express their feelings and ideas.</p> 	<p>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</p> <p>(Animals incl humans)</p>		<p>light source is blocked by a solid object. Find patterns in the way the size of the shadows change</p> 	<p>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 sound gets fainter as the distance from the sound source increases.</p> 		
<p>Key vocabulary</p>	<p>Smell, sound, sight, see, look,</p>	<p>See Seasonal Changes</p> <p>See Animals Including Humans</p>		<p>Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous.</p>	<p>Sound, source, vibrate, vibration, travel, pitch, volume, faint, loud, insulation.</p>	<p>Earth, sun, moon, Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune, Pluto (dwarf planet), spherical, solar system, rotates, star, orbit, planets, axis, night, day, season, galaxy. Meteorite.</p> <p>(Earth and Space)</p>	<p>Year 3 vocabulary- Plus Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous.</p>

<p>Key indicators</p>	<p>Children will be able to identify and name different colours. They can mix colours and explain the changes. They can experiment with sound and making different noises with musical instruments and express using different terms such as loud, quiet, beat, vibrate.</p>	<p>See Seasonal Changes See Animals Including Humans</p>		<p>Can describe how we see objects in lights and can describe dark as the absence of light. Know it is dangerous to look at the sun. Define transparent, translucent and opaque. Can describe how shadows are formed. Predict what materials will be more/less visible. .</p>	<p>Can describe different types of objects producing different sounds and that the sound is produced by vibration in the object. Can describe sounds travelling through different mediums such as air, water, metal. Can find patterns between pitch and volume and the features of the object producing it. Can recognise that sounds get fainter as the distance from the sound source increases. Can explain what happens when you strike a drum or pluck a string- use diagrams to show. Demonstrates how to increase/decrease pitch and volume.</p>	<p>(See Earth and Space)</p>	<p>Can describe with diagrams how light travels in straight lines, either from sources or reflected from other objects into our eyes. Can describe with diagrams how light travels in straight lines past translucent or opaque objects to form a shadow of the same shape.</p>
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<p>Forces</p> 	<p>Understanding the World. Explore and talk about different forces they can feel. Can talk about the differences between materials and changes they notice.</p>  	<p>Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p> <p>(Materials)</p>	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p>(Materials)</p>	<p>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 and attract some materials and not others. 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. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>     		<p>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 levers, pulleys and gears, allow a smaller force to have a greater effect.</p>    	<p>To describe the movements of the Earth, and other planets, relative to the Sun in the solar system (Earth and Space)</p>
<p>Key Vocabulary</p>	<p>Push, pull, twist, stretch, turn, open, lift, squeeze, pinch, flick, tap.</p>	<p>Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see through, not see through.</p> <p>(Materials)</p>	<p>Names of materials: wood, plastic, glass, metal, water, rock, brick, paper, fabric, card, rubber, suitable/unsuitable, use/useful, hard/soft, stretchy/stiff, Rigid/flexible, waterproof/absorbent, strong/weak, rough/smooth, transparent/opaque, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching.</p> <p>(Materials)</p>	<p>Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel. Magnetic material, metal, iron, steel, poles, north pole, south pole.</p>		<p>Force, Gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears.</p>	

Key indicators	Children will be able to play with a range of toys of varying sizes made of different materials and fit them together in different ways such as twisting, pushing, slotting or magnetism. Can manipulate playdough in different ways.	(See Materials)	(See Materials)	Give examples of forces in everyday life. Give examples of objects moving differently on different surfaces. Name a range of magnets and show how the poles attract and repel. Can draw diagrams using arrows to show the attraction and repulsion between the poles of magnets. Can use results to describe how objects move on different surfaces. Can use results to make predictions. Can use some classification to know some metals are not magnetic. Use test data to rank magnets.		Can demonstrate the effect of gravity acting on an unsupported object. Can give examples of friction, water resistance and air resistance. Can give examples of when it is beneficial to have high or low friction, water resistance, and air resistance. Can demonstrate how pulleys, levers and gears work.	
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<h2>Electricity</h2>	<p>Shows skills in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movement or new images.</p> 	<p>Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p> <p>(Materials)</p>	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> <p>(Materials)</p>		<p>Identify common appliances that run on electricity. Construct a simple series 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 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> 	<p>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets.</p> <p>(Materials)</p>	<p>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. 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. Use recognised symbols when representing a simple circuit in a diagram.</p> 
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		<p>Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, toil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, still, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see through, not see through.</p> <p>(Materials)</p>	<p>Names of materials: wood, plastic, glass, metal, water, rock, brick, paper, fabric, card, rubber, suitable/unsuitable, use/useful, hard/soft, stretchy/stiff, Rigid/flexible, water proof/absorbent, strong/weak, rough/smooth, transparent/opaque, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching.</p> <p>(Materials)</p>		<p>Can name the components in a circuit. Can make an electric circuit. Can control a circuit using a switch. Can name some metals that are conductors. Can name materials that are insulators. Can communicate structures of circuits using drawings. Can incorporate a switch. Can add a circuit with a switch to a DT project and demonstrate how it works. Can describe how a switch works.</p>	<p>Explain how a circuit operates to achieve particular operations, such as control the light for a torch with different brightnesses or make a motor go faster or slower Make circuits to solve particular problems such as a quiet and a loud burglar alarm Carry out fair tests exploring changes in circuits Make circuits that can be controlled as part of a D&T project</p>
					<p>Electrical, appliance, mains, plug, circuit, component, cell, battery, positive, negative, connect/connectors, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol.</p>	<p>Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage NB Children do not need to understand what voltage is but will use volts and voltage to describe different batteries. The words cells and batteries are now used interchangeably</p>



Procedural Knowledge							
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants (Biology)	<p>Make observations and drawings of plants. Know similarities and differences between the natural world and contrasting environments. Can plant seeds and care for growing plants. Understand basic plant lifecycle. Know leaf, stem, petals.</p>	<p>Can name common plants and describe the basic parts of flowering plants (deciduous/evergreen) Can describe key features of trees and plants e.g. shapes of leaves, colour of flower, blossom. Can use photos to talk about how plants change. Can talk about plant lifecycles. Know basic parts of plant e.g. leaf, stem, petal, flower, stalk, bud, roots, fruit, bark, blossom.</p>	<p>Can describe how plants have grown from seeds and bulbs and how they have developed over time. Know conditions for plant growth. Can spot similarities and differences in bulbs and seeds. Confident in ordering parts of the plant lifecycle. Know all parts of the plant and their function. Know terms: light, shade, sun, warm, grow, healthy, growth, germinate.</p>	<p>Can explain the function of the parts of a flowering plant. Can explain the life cycle of a flowering plant including pollination, seed formation, seed dispersal and germination. Know different methods of seed dispersal. Know the requirements of plant growth and how water is transported through the plant. Know how the sun helps plants photosynthesis. Know terms: photosynthesis, pollen, pollination, absorb, nutrients, reproduce, germination, stamen and style.</p>	<p>Can classify plants in different ways (Living things)</p>	<p>Can explain the lifecycles and processes of a range of different plants and trees. Can use ID guides to identify plants. (Living things)</p>	<p>Can classify plants in different ways using observable characteristics/ similarities and differences. Give reasons for classifying plants based on characteristics (Living things)</p>
Animals including humans (Biology)	<p>Can name a range of animals e.g. farm/jungle.</p> <p>Can group using basic characteristics e.g. land/sea, 4 legs, can fly/cant fly.</p> <p>Can name and point to different body parts e.g. head, body, tummy, knees, legs, arms, toes, eyes, ears, mouth,</p>	<p>Can name a range of animals which include animals from each of the vertebrate groups. Understand and categorise animals who are herbivore, carnivore and omnivore. Describe and compare animals based on observable characteristics. Know terms: reptile, amphibian, mammal.</p>	<p>Can describe how animals change as they get older. Know names of animals and their offspring e.g. goat- Kid. Can order the lifecycle of different animals e.g. butterfly. Can explain what humans and animals need to survive e.g. food, sleep, exercise, water, shelter. Know about</p>	<p>Can name the main bones in the skeletal system such as skull, ribs, humerus, vertebrae, pelvis, ulna, carpals, radius, femur, phalanges, patella, tibia, tarsals, fibula, metatarsals. Know the function of the skeletal system. Can describe how muscles and joints help to move.</p>	<p>Can identify and label and draw main parts of the digestive system and explain the process. Know the different types of teeth in their mouth: molars, pre molars, canines and incisors and their function. Can identify animals and classify based on their teeth whether they are herbivore, omnivore</p>	<p>Can explain the changes that take place in boys and girls during puberty. Can explain how a baby changes physically as it grows and what it is able to do at each stage. Understand that different animals have different gestation periods. Know the importance of physical and mental</p>	<p>Can identify, label and draw parts of the circulatory system e.g. heart, blood vessels, capillaries, arteries, blood. Understand the function of the different parts. Understand how nutrients are transported around the body within animals and humans. Know the impact of a balanced diet, exercise</p>



	nose, hair, fingers. Know basic senses e.g. touch, taste, hear, see.	Can name, draw and label parts of the human body and say what sense is associated. Can name the 5 senses.	microorganisms and how to keep hygienic. Understand the term balanced diet and can identify some food groups. Understand the effects of exercise on the body. Know terms: offspring, nutrition, reproduce, exercise, hygiene, microorganism, germs.	See similarities and differences in skeletons can classify into endoskeleton, exoskeleton and hydrostatic skeleton. Can name different nutrients found in food. Know the different food groups and why we need to eat a balanced diet.	and carnivore. Can order and draw a range of lifecycles and food chains. Can identify the producer, predators and prey.	health.	and lifestyle on the way their body's function. Recognise the impact on all body systems learned so far.
Living things/ Evolution and inheritance (biology)	Can name some plants and animals. Can explore habitats and know where some animals live. Can compare and describe plants and animals.	Know common plants and trees (plants) Identify and name common animals (animals) Know herbivore, carnivore and omnivore (animals) Describe and compare variety of animals (animals)	Can find a range of items which are dead, living and never been alive. Know what a habitat and micro habitat is and identify animals which live in different habitats. Can talk about features of animals and plants and how they are suited to live in particular habitats. Can construct a simple food chain using terms producer, prey, predator, energy. Can identify different sources of food and understand where food comes from.	Identify and describe functions of different plants. (Plants) Identify and describe different animals and how they are adapted to live in different environments. Understand the term climate (Animals) Can explain how a fossil is formed (Rocks).	Can name living things in a range of habitats, giving key features that helped identify them. Can give examples of how an environment might change both naturally and due to human impact. Explain how changes in environment can be dangerous to animals and lead to extinction. Know that some animals hibernate.	Describe the lifecycles of mammals, amphibians and insects using diagrams. Can describe similarities and differences between them. Understand the term reproduction in plants and animals.	Can give examples in the five vertebrate groups and some in the invertebrate group. Can give key characteristics of these groups. Can give examples of flowering and non-flowering plants. Can identify unknown plants using ID and classification charts. Can explain why animals belong to groups. Know that Carl Linnaeus classify plants and animals. Can explain the process of evolution and give examples of how plants and animals are suited/adapted to their environment. Give examples of how animals have evolved over time. Understand that fossils give us evidence of the past and know the process of fossilisation.
Seasonal Changes	Know the four seasons Can experience different seasons and describe how they feel.	Can name the four seasons and identify in the year when they occur. Can observe and	Know that the sun rises and sets. Understand that we have night and day.	Light- Can describe how we see objects in light and describe dark as the absence of light.	Sound- Can describe different types of objects producing different sounds. Know	Earth and space- Know how the earth and moon move. Know different planets	Light- Can describe using diagrams how light travels in straight lines, either from

<p>(biology)</p> <p>Earth and Space (Physics)</p> <p>Light/Sound (physics)</p>	<p>Can comment on the environment e.g. leaves on the ground. Can name some clothes they may wear. Know some weather e.g. rain, wind, sun, snow, cloud. Understand the terms night/day</p>	<p>describe the weather in different seasons. Can describe days being longer in summer and shorter in winter. Compare seasons.</p>	<p>Know why the sun helps plants grow. (plants) Know that it is dangerous to look at the sun (animals)</p>	<p>Know it is dangerous to look at the sun. Understand the term ultra violet. Know the terms transparent, translucent and opaque. Can describe how shadows are formed Predict which materials will be more/less visible. Know the term reflective and why reflective materials are useful.</p>	<p>that sound is caused by vibrations. Can describe how sound travels through different mediums e.g air, water, metal. Can find patterns between pitch and volume and the features of the objects producing it. Know that sounds get fainter as the distance from the sound increases.</p>	<p>in the solar system. Can understand night and day by explaining the rotation of the earth on its axis. Understand why shadows change using scientific vocabulary and the position of the sun. Can explain how a sundial works. Can explain why we have time zones.</p>	<p>sources or reflected from other objects into our eyes. Can explain how we see things and can label basic parts of the eye and explain their function. Can describe with diagrams how light travels past translucent or opaque objects to form shadows of the same shape. Know how to change the size of shadows by moving objects closer/further from light source.</p>
<p>Materials (Chemistry)</p> <p>Rocks (Chemistry)</p>	<p>Can talk about the similarities and differences between materials. Can describe using basic words. They can group materials based on how they feel or look like.</p>	<p>Can label a picture of an object based on what it is made of. Can describe the properties of materials. Can sort materials using its properties. Know terms: wood, plastic, glass, metal, water and rock.</p>	<p>Compare the suitability of different materials including wood, metal, plastic , glass, brick, rock, paper, cardboard, water. Know that shapes of solid objects can be changed by squashing, bending, twisting and stretching. Can describe similarities and differences.</p>	<p>Compare and group types of rock and give physical features of each. Explain how a fossil is formed. Explain that soils are made from rocks and also contain living/dead matter. Classify rocks in a variety of ways using scientific vocabulary. Test properties of rocks. Describe materials using transparent, translucent and opaque.</p>	<p>Can name properties of solids, liquids and gasses. Can explain process of melting and freezing. Know the terms evaporation and condensation. Can describe the water cycle. Know materials have different melting points. Can test a variety of materials to answer questions.</p>	<p>Can explain every day uses of materials. Can explain what dissolving is. Can name equipment for filtering and sieving. Know how to recover substances from solutions or mixtures by evaporation, filtering or sieving. Can describe reversible and non-reversible changes to materials and give examples.</p>	<p>Recognise that things have changed over time and fossils provide information about living things that inhabited the Earth millions of years ago. (Evolution and Inheritance)</p>
<p>Forces (Physics)</p> <p>Electricity (Physics)</p>	<p>Shows skills in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movement or new images. Understand push and pull.</p>	<p>Understand the terms push and pull. Can move objects by applying a force such as pushing a car.</p>	<p>Know how different materials can be changed by applying a force such as squashing, bending, twisting and stretching.</p>	<p>Compare how things move on different surfaces. Can give examples of forces in everyday life. Name a range of magnets. Know that magnets have a north and south pole. Can show how the poles attract and repel. Can draw diagrams to show the attraction and repulsion</p>	<p>Electricity- can name the components in a circuit. Can make a simple circuit. Can control a circuit using a switch. Can name some conductors and insulators. Can use drawings to represent their circuits. Can describe how a circuits works. Can name some appliances that run on</p>	<p>Can explain the effects of gravity acting on an unsupported object. Can give examples of friction, water resistance and air resistance. Can give examples of the benefits of high/low friction, water resistance and air resistance. Can demonstrate how</p>	<p>Understand different forces and can apply this knowledge across different subjects e.g. geography. Electricity- Understand voltage and amps. Know how to make bulbs brighter, buzzers louder. Can label and name components in a circuit. Can draw circuits using symbols.</p>

				between poles of magnets. Can name magnetic and non-magnetic materials.	battery/mains. Know how to make a bulb brighter.	pulleys, levers and gears work. Know that these systems can make lifting heavy objects easier.	Make circuits to solve particular problems such as a quiet and a loud burglar alarm.
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Propositional Knowledge							
<p>Asking Questions</p> 	Question why things happen. Ask questions to find out how things work.	Can ask simple questions. Can ask yes and no questions to sort and classify. Can raise own questions.	Can ask simple questions relevant to the topic. Know their questions can be answered in different ways. Can use a range of question stems.	Can raise questions can carry out tests with support to find things out. Can write a range of questions relevant to the topic. Can answer questions posed.	Can ask a range of questions to sort and classify. Can write a range of questions using own scientific knowledge. Can answer questions independently using secondary sources.	Use scientific experiences to explore ideas and raise different higher order questions. Can create further questions to investigate. Can raise questions and suggest reasons for similarities and differences	Can raise questions to further prove or disprove a scientific enquiry. Can raise questions about a range of phenomena.
<p>Make predictions</p> 	Can make simple predictions based on comparisons e.g. float or sink.	Can make basic predictions over things they can see or their own ideas. Use some scientific vocabulary.	Draws knowledge from observations to make predictions. Can begin to test predictions and later answer questions.	Draws on knowledge to make predictions. Can add detail to their predictions. Make further predictions based on what's observed or tested.	Predictions re detailed and explains their thinking, they link to tests, data and use scientific language. Raise further predictions from results based on patterns.	Use subject knowledge, observations or previous learning to make predictions. Add detail and explanations. Can identify a range of variables which could affect their investigations.	Use test results to make predictions to set up further comparative tests. Uses evidence to support predictions. Develop predictions based on research and scientific knowledge.
<p>Observation and Measurement</p> 	Observe and describe what they see using everyday language. Use equipment such as magnifying glasses and viewers. Take measurements by comparing and notice simple patterns e.g. bigger/smaller.	Can identify and group, compare and contrast using observations, video and photographs. Can observe changes over time and describe changes. Can use magnifying glasses, viewers and digital microscopes. Use simple measurement and equipment such as egg timers and stop watches. Use non-	Observe closely and select the correct equipment. Can identify a range of plants using ID charts. Observe how plants and animals grow and record findings. Notice similarities and differences. Use observations and ideas to suggest answers to questions. Use standard units to estimate and measure.	Make systematic and careful observations. Select own equipment for observing including digital cameras. Look for naturally occurring patterns. Collect data from own observations. Can make observations and decide how to record them to answer a question. Take accurate measurements using standard units. Use a	Make systematic and careful observations to ask questions and group objects using classification keys. Observe closely and explain processes. Identify similarities, differences or changes related to simple scientific ideas or processes. Take and record accurate measurements using standards units to 2dp.	Observe carefully and make comparisons. Observe changes over a period of time. Make decisions about what to observe to answer questions. Use observation skills and ID kits to identify plants and animals. Take repeat measurements where appropriate. Can find the average of data. Select measuring equipment and use	Can make accurate drawings of plants and animals based on observations. Take measurements using a range of scientific equipment with increasing accuracy and precision, taking repeat readings where appropriate. When collecting measurements decide whether to increase sample size for validity

		standard measures.	Use rulers, scales, thermometers and measuring vessels with a degree of accuracy.	range of equipment and begin to read digital measurements from data loggers and stop watches	Use data loggers to record. Use volt metres and begin to gather repeat readings to increase accuracy.	accurately e.g. ruler, tape measure, trundle wheel, force metres.	and reliability. Record measurements to 3dp. Use protractors, rulers, force metres, volt meters accurately
<p>Planning enquiries / Setting up tests</p> 	<p>Test out ideas and take risks through trial and error. Engage in open ended activities. Choose resources they need for their activity from their environment. Find ways to solve problems.</p>	<p>Begin to recognise ways they may answer scientific questions. Experience different types of enquiry including practical activities. Use resources provided by the teacher and suggest some resources of their own e.g. pipettes.</p>	<p>Can plan and carry out simple tests linked to the different types of enquiry. They can carry out a simple comparative test using some of their own ideas. Can suggest their own resources to carry out tests.</p>	<p>Can set up practical enquiries using comparative and fair tests. Use a range of scientific enquiry. Can investigate and answer on questions linked to shared planning frame. Understand some of the variables needed to be controlled with support. Use a range of equipment e.g. thermometers and data loggers.</p>	<p>Can identify the type of enquiry needed to answer a question. Follow a plan to carry out observations and tests. Use a planning approach with more independence identifying variables and what needs measuring. Children choose their method to carry out their investigation.</p>	<p>Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and changes. Understand what type of scientific enquiry is needed to answer and prove/disprove scientific questions or phenomenon.</p>	<p>Children choose the type of enquiry needed to carry out their investigation. Children can pose and answer their own questions, controlling variables where necessary independently. Decide whether sample size needs to be increased for validity. Identify a range of factors which may affect their investigation.</p>
<p>Recording</p> 	<p>Draw pictures or objects in their own environment. Can take photos of things that interest them. Can count results and start to make marks to record results. Can sort in at least 2 groups. Can create a class pictogram using pictures and objects.</p>	<p>Begin to show some accuracy in drawings, observations and use simple labels. Use scientific vocabulary provided by the teacher. Can complete a simple prepared table with some support and scaffolding. Can add marks to a chart to complete data.</p>	<p>Gather and record data to help answer questions. Record observations using photo video, drawings, labelled diagrams or in writing. Count results using tally charts. Use prepared tables to record results more independently. Use simple keys based on yes and no questions. Can sort into 2 groups with own categories and explain reason for choices. Record using prepared bar charts.</p>	<p>Record findings using scientific language, drawings and labelled diagrams including detailed labelling and written explanations based on observations. Can complete a table where they can add own headings and results. Use simple classification keys and Venn diagrams. Can use Carroll diagrams and give reasons for criteria. Can produce bar charts adding own axis labels and headings.</p>	<p>Record findings using systematic and careful observational drawings and labelled diagrams using scientific vocabulary. Children to present the same data in different ways. Can create own tables with headings. Can record using classification keys. Can use Venn and Carroll diagrams with accuracy. Can use discrete and continuous data using line/scatter graphs. Can construct bar chart independently.</p>	<p>Present results in a variety of ways to help answer questions. Can decide how to record from a range of approaches. Can record ideas using accurate diagrams using scientific language. Create own results table including cause and effect. Record results systematically and repeat readings. Use and develop classification keys. Can classify in a number of ways. Use line or scatter graphs to calculate range in a set of data using different scales. Can produce line graphs with various increments.</p>	<p>Record data and results with increasing complexity e.g. accuracy of measurements. Use scientific diagrams, models and labels accurately with clarity and using precise scientific language. Calculate mean and range of a set of data. Can use and produce classification keys independently by posing questions. Can independently collect data and produce scatter and line graphs. Can create bar charts and pie charts to present data.</p>
<p>Interpreting</p>	<p>Offer explanations for</p>	<p>Can use evidence from</p>	<p>Communicate findings</p>	<p>Draws conclusions</p>	<p>Draws simple</p>	<p>Identify patterns and</p>	<p>Look for patterns and</p>

<p>and concluding</p> 	<p>why things happen-making use of some recently introduced scientific vocabulary. Develop own narrative and explain by connecting ideas or events. Develop vocabulary which meets the breadth of their experiences.</p>	<p>simple tests when answering questions. With help begin to notice patterns and relationships. Talk about what they have found out and how they found it out. Can make comparisons and recognise biggest/smallest, most effective/least effective from data. Can use simple models to explain processes e.g. seasonal changes, lifecycles.</p>	<p>to an audience using relevant scientific language and illustrations. Can identify casual relationships and patterns in results. Can identify which results do not fit the overall pattern and explain findings. Refers to the table of results when describing what has happened. Draws a basic conclusion (with support from the teacher) using own scientific knowledge, observations and comparisons. Uses results of investigations to answer enquiry questions.</p>	<p>based on observations. Can compare something using results and the conclusion is consistent with the data. Able to adjust opinion and predictions based on results. Can give reasons for results including any anomalies. Use simple scientific language to discuss ideas and communicate their findings in ways appropriate for different audiences orally and written</p>	<p>conclusions from results to answer questions and support their ideas. Look for casual relationships in data and identify evidence that refutes/supports ideas. Report on findings to an audience orally and in writing using appropriate scientific vocabulary for a range of audiences. Children use evidence to suggest values for different items tested using the same method. Draw conclusions based on straightforward evidence and current subject knowledge to support their findings, Suggest improvements and raise further questions.</p>	<p>casual relationships that may be found in the natural environment. Children interpret data to generate simple comparative statements based on evidence. Use results to draw conclusions and can identify external factors that cannot be controlled e.g.temperature inside and outside. Use scientific language and illustrations to discuss, communicate and justify scientific ideas. Can use comparative statements to explain results and how things work.</p>	<p>relationships using a suitable sample. Use oral and written forms such as displays to report conclusions, casual relationships and give an explanation of the degree of trust in their results. Makes suggestions for ideas that can be explored using pattern seeking. Can spot anomalies and identify results that do not fit the overall pattern. Use data to refute or support ideas or arguments. Focuses on scientific reasons for overall pattern rather than a comparison. Uses labelled diagrams to support their explanation. Use ideas from secondary sources to support their ideas, choosing appropriate websites.Create detailed models to explain processes such as circulatory system and lifecycles.</p>
<p>Evaluating</p> 				<p>Apply their knowledge of the topic when evaluating. Explain any amendments and how this impacted the investigation/test.</p>		<p>Evaluate how effectively variables were controlled and what they may do to improve the enquiry.</p>	

What experience do we want our students to have had?
 What other opportunities will our students have had in science?

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Colour Read Colour monster book. Explore and experiment with colour paddles, equipment and torches. Make colour spinner (Newton) Look at colour images, look through rainbow glasses. Bicarb and paint experiment of changing colour. Skittles activity, feely bag, Dark den, paint mixing. Colour mixing using diffusion, colour in nature walk, colour mixing in bags.</p> <p>All about me Point to parts of the body. Draw parts of the body in a mirror. Through a box lid Make own face- where do features go? Label body Find body parts in gloop Order stages of growth Role play corner Set out areas with the above stations) Identify body parts Identify senses Play keeper of the keys Food tasting Feely bags Instruments</p> <p>Celebrations Zoom in image of spider-</p>	<p>Animals Including Humans 1- Draw around body and label 2- Compare features that are the same and different. Explore senses Parts of tongue and taste- taste new foods. Sight Test. 3- Body parts bingo Animals and smell Smell test. Feely bag 4- Order sounds Classify animals and animal groupings 5- Animal X rays Compare and contrast animals- How big and how small 6- Zoom in and out Tiger who came to tea. Sort carnivore, herbivore and omnivore. Animal teeth</p> <p>Materials 1. Rocket landing in school grounds and mission from Tim Peake. - Sorting materials -What's in the bag? 2. Recap materials -Odd one out -Properties of materials -Material hunt. 3. Materials bingo -Feely wall -Mystery bag</p>	<p>Animals Including Humans 1- Matching animals with offspring. 2- Lifecycles 3- Using IT to answer questions 4- Animal menus 5- Investigating which exercises raise pulse rate. 6- Investigating food groups and tasting foods. Sort foods according to group. 7- Balanced diets, Links to art, children create art piece based on their food diaries. 8- Hygiene and medicines- investigation into why soap is important. 9 and 10- Children to design and create own microbe. Children to create their own soap or bath bomb. 11- germ investigation using bread. 12- Recap learning.</p> <p>Living Things and Habitats 1- Sort, living, dead and never been alive. Egg box material hunt. 2- Sorting animals according to its biome. 3- Exploring different biomes. Who am I clues?</p>	<p>Animals Including Humans 1. Recap previous learning. Introduction to the skeletal system- label bones. 2. Build a skeleton- skeleton relay. Why do we need bones experiment? 3. What does a physiotherapist do? Close drawing of the hand and bones in the hand. Children plan their bionic hand design. 4. Children make their bionic hand. 5. Children classify animals into vertebrate and invertebrates. 6. Function of the skeleton- investigate how the skeleton protects the organs. 7- How do muscles work? Make a muscle model to explain the process. 8- What do humans need to stay alive? Explore food contents and classify using food wheel. 9- Record results in a table regarding how much of a particular category a food contains e.g. sugar. 10- Eat well plate game, balanced and unbalanced plates. End of unit quiz.</p> <p>Rocks</p>	<p>Animals Including Humans 1. Digestive system drama. Make model of digestive system. 2. Identify different teeth, functions by eating different food. Compare with household items. 3. Tooth decay and effects. Set up egg experiment in liquids. Make own toothpaste 4. Herbivore, carnivore, omnivore. Look at skeletons and teeth. 5. Food chains- poo dissection. Link to mole book. 6. Food chains/food webs. Evaluate learning, concept map and quiz.</p> <p>Living Things and Habitats 1. Identify animals and group based on characteristics. Match animal to habitat. 2. Human guess who, classification key with human characteristics. Make classification key for liquorice Allsorts. 3. Mini beast hunt- recording type of habitat and what mini beasts are found. 4. Make own classification</p>	<p>Animals Including Humans 1. Recap body systems, teeth and animals. Research gestation periods of animals. 2. Lifecycle of a human. Use fruits and vegetables as models for foetus development. Plot developmental stages on line graph. 3. Observe how we change as we age. Developmental milestones. Order what happens at different stages. 4. Puberty and changes on the body. 5. Looking after mental health and design a poster. 6. Relaxation techniques, complete poster and end of unit test.</p> <p>Living Things and Habitats Recap previous learning- animal classification and lifecycles. Classification drama. Classify animals. Draw a lifecycle. 2. Life cycles of different organisms. Life cycle drama. Comparing lifecycles using a diagram. 3. Find out about the work of Jane Goodall and David Attenborough. Observe animals and take notes in a</p>	<p>Animals Including Humans 1- Children create own model of the heart and explain how it works using scientific language. 2- Circulatory drama. Create a pendulum swing to measure pulse rate. Extra- heart dissection. 3-Explore heart location in animals. Children to make blood 4- Use picture of the heart to explain how blood flows in and out. Use skittles to demonstrate how nutrients are absorbed. Understand why blood clots and the role of the platelets to form a scab. 5- Recap on healthy foods. Investigation into heart recovery rates. 6- Drugs and testing in sport, explore effects of smoking. Children create own smoking model. Explore importance of mental health.</p> <p>Living things and Habitats 1. Sort animals and leaves into broad groups. 2. Sort minibeasts, classify minibeasts using classification keys. Human classification.</p>

<p>curiosity Spider making web Spider search outdoors Make spider web to stick flies to. Label spider and make own spider. jelly worms in lemonade activity Creepy crawly hunt Potion station Bug classification and obs drawings. Witches cauldron and potions. Ice hands and melting Candy canes in bicarb experiment Label reindeer Ice sensory play Santas workshop play corner Snow scene. Make own snow Which chocolate is the stretchiest?</p> <p>Traditional Tales Read gingerbread man Test what happens if gingerbread man gets wet? Make a raft using junk materials Make umbrella or roof Playdough gingerbread men. Retell story using small play. Make bridges out of bricks. Read Three Little Pigs Materials test Make houses out of different materials. Make a maze with Lego. Make an outside maze. Read Billy Goat Gruff</p>	<p>-That's not my books- find suitable materials. 4- Astro nappy absorbency test. -Charles Macintosh. 5- Make curtains for spaceship (transparent/opaque) 6- Stretchy material test.</p> <p>Plants 1. Read tiny seed -Identify fruits and where they grow -Zoom in activity. -Observation of fruits and veg -Growing potatoes. 2- Read Jack and the beanstalk -Order how seeds grow. -What do plants need to grow? -Plant diary 3- Plant hunt in local environment. -Identify parts of a plant. 4-Plant bingo -Plant dissection -Plant modelling 5- Read Leaf Man -Leaf walk -ID leaves using ID sheet and group leaves. 6- Odd one out -Why do leaves fall off trees test. -Deciduous vs evergreen.</p> <p>Seasonal Changes 1. Identify 4 seasons -Read Snow rabbit, spring rabbit. -Sort clothes according to season</p>	<p>Biome home learning 4- Micro habitats and mini beast hunting. 5- completing tables for extraordinary creatures. Creating own creature and habitat. 6- Food chain drama, draw food chains.</p> <p>Materials 1. Mystery bag. Make material monsters. Sort materials 2. Materials hunt. 3. Materials drama and modelling, Silly materials. 4- comparing materials for 3 little pigs house. 5- Humpty dumpty investigation- make a protective sleeping bag using best material. 6- John Dunlop investigating bouncy materials.</p> <p>Plants 1. Identify parts of the plant- dice game. 2. Sam plants a sunflower book- lifecycle of a sunflower and strawberry. 3. Observing seeds and observational drawings. Classifying seeds. 4. Seed hunt and identifying seeds. 5. Conditions for growth, seeds from the kitchen 6. Investigation into plant growth using different soils. 7. Investigating bulbs and recording seed</p>	<ol style="list-style-type: none"> 1. Recap previous learning. Using chocolate to represent rocks. Rock drama. 2. Classifying rocks based on their characteristics. Rock cycle. Natural and manmade rock. 3. Rock drama- properties of rock. Rock tests (hardest, most durable, waterproof, does not react to acid) 4. Process of fossilisation. Mary Anning's work. Explore fossils. Make own fossil following the process. 5. How are rocks formed and how do they change? Rock cycle drama. Rock cycle practical. Learn about Geologist and ground investigation engineer. Soils- investigation into what soil is made from. End of unit quiz. <p>Forces and Magnets 1. Recap previous learning. Read gigantic turnip, explain friction using rice in bottle. Children observe different forces. 2. Recap on vocabulary, investigate different road surfaces and find out about John McAdam. Use force metres and also recap on Sir Isaac Newton. 3. Explore magnetic and</p>	<p>keys for mini beasts found. Classify leaves using given keys. Identify evergreen and deciduous trees. 5. Duffy book with sea pollution. Children research endangered animal and think of the reasons why. 6. Discuss how environments change and how animals adapt. Round robin of 3 environments- children record changes and effects humans have on habitats.</p> <p>Sound 1. Poem- sound collector. Round robin of activities to observe sound. 2. Order sound cards, how are sounds made? String phone test. 3. Sound in water- Whale song. Bottles, straws, ruler experiment. 4. Which frequency of sound travel the furthest? 5. Storm in a circle. Honda advert. Sound walk. Investigation into pitch making musical instruments. 6. F1 Ear muffs. Planning own test using post it note approach. Recap. 7. Animal ears and slinky demo.</p> <p>Electricity 1. Sorting appliances in to mains and battery. Explore</p>	<p>table. 4. Pollination vs fertilisation. Recap on pollination. Pollination drama recap. Sexual and asexual reproduction. School group survey for different types of plants. Children research how different plants reproduce. 5. Investigate how to grow new plants from different parts of the parent plant. Children carry out a fair test to grow their own plant. 6. How do animals reproduce? Investigate different gestation periods and make Top Trumps. Assessment test.</p> <p>Space 1. Recap previous learning on light and shadow. Read Curiosity, ordering planets and looking at relative sizes through Playdough planets. 2. Investigation into how big each planet is using fruit and veg. Creating a solar system in my pocket. 3. Investigate phases of the moon through drama and Oreo moon phases. Children draw the 8 moon phases. 4. Children use a model to investigate the relationship between the sun, moon and earth. Ext investigate how their weight would change on different planets. 5. Investigate day and night and why different parts of</p>	<p>3. Classification. Seven levels of Linnaeus System- Carolus Linnaeus. Different classifications based on Kingdom, Phylum, class, order, family, genus and species. Children classify animals using Linnaeus scale. 4. Quirky creatures. Specific descriptions using facts. Children to use classification system to create own creature. 5. Learn about different microorganisms and how they are classified using the system. Good and bad bacteria. Food decay. Edward Jenner and smallpox vaccine. 6. Learn about the effects of Yeast, yeast experiment. Make bread to show the effects of yeast.</p> <p>Electricity 1- Circuit investigations. Practical activities. Electricity hazards. 2- Drawing electrical symbols. 'Will it work?' activity. 'What is electricity?' investigation. Measuring bulb brightness using data logger and recording in Lux. 3- What is a cell/battery? Children to make own fruit batteries. 4- Investigation into voltage. Investigation into changing the sound of a buzzer in a circuit using knowledge of voltage. 5- Create a game for the fair</p>
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<p>Make a raft Make a bridge- junk Outside bridges</p> <p style="text-align: center;"><u>Animals</u></p> <p>1. look at different animals in different habitats. What types of animals live in Madagascar? Children to match the animal to where they can be found in the UK or around the world. 2. Explore different animal habitats. Children to explore different habitats in their environment. 3. Children to match the animals and make their own dioramas. 4. Introduce the seasons, children to think about how weather may effect animals. Introduce term hibernation. Children to create a den to hibernate in, children explore animal insulation with ice cube experiment. Children to find out basic facts about animals.</p> <p style="text-align: center;"><u>Under the Sea</u></p> <p>1. Children's pre knowledge about what lives under the sea. Share Rainbow fish. Explore different habitats in the ocean. Children identify where different animals in the sea may live. 2. Children to draw their fish and name parts of the fish. Children can try and classify fish drawn using basic features. Children to use a basic key to identify fish.</p>	<p>2. Season song. - Autumn video -Chromatography in leaves and pens. 3- Zoom in, zoom out -How are crystals formed experiment -How snow is formed experiment -What does winter feel like? 4- Odd one out -Spring walk using ID sheet spotting signs of spring. -Rain water collecting and measuring. 5- Facts about the sun -Dangers of looking at the sun. -UV bead experiment. Additional UV oven/shadows 6- Day and night seasons modelling using globe and torch. -Identification of clouds -Cloud in a jar experiment.</p>	<p>growth/germination. 8- Conditions for growth experiment- cress. 9. Evaluating test. 10. Plants in different climates, how do plants adapt to their environment? 11. Explore famous botanists. Outdoor learning- tree survey 12. Evaluate learning.</p>	<p>non-magnetic. 4. Explore magnetic materials and children plan their own fair test. 5. Investigate why magnets have two poles. Children will find out about magnetic fields.</p> <p>Focus on the earths magnetic field and children make own compass. End of unit quiz.</p> <p style="text-align: center;"><u>Light</u></p> <p>1. Pre learning. Read the Darkest Dar as stimulus. Light investigation. Natural and artificial light sources. 2. Investigation into prisms, children to understand why light is reflected. Investigation into which materials reflect light. 3. Why is the sky blue? Investigation into UV light and sun cream. 4. Optical illusions. Investigation into shadows and how shadows change. 5. Investigation into how shadows change depending on where the sun is in the sky.</p> <p>Application lesson making curtains with most opaque materials.</p> <p style="text-align: center;"><u>Plants</u></p> <p>Pre learning. Labelling a plant. Functions of the plant. Labelling the male and female parts of the</p>	<p>electrical circuits, symbol bingo. Challenge cards. 2. Oscar and the bird- thinking about electricity in real life. Human circuit. Building simple circuits 3. Testing conductors and insulators. 4. Connecting a switch and making own switch using different materials. 5. Scientists linked to the development of electricity. Children make a wind turbine 6. Renewable energy types, children design a house for the future.</p> <p style="text-align: center;"><u>States of Matter</u></p> <p>1. Ballooning around- ice. Sorting materials based on properties. 2. Predicting, glove experiment and dancing raisins. 3. Investigating into melting points. Difference between melting and dissolving. 4. Making ice cream. 5. Evaporation and condensation. Fair test. Materials Scientist. Modelling the water cycle part 2- window water cycle.</p>	<p>the world have day at a different time. 6. Look at what astronauts do and famous astronauts. What causes craters on the moon? Children learn about asteroids and comets and plan their own crater experiment.</p> <p style="text-align: center;"><u>Properties of materials</u></p> <p>1. Recap previous learning on materials and forces. Investigate materials and their properties through a 'Cinderella' materials problem solving. 2. Understand the difference between melting and dissolving, soluble and insoluble. Children will conduct a test to find out which materials are soluble, and which are not. 3. Children will investigate if they can recover a substance from a solution by heating materials. 4. Children will learn about reversible changes by changing milk into butter. 5. Children will recap irreversible and reversible materials then look at changes resulting in new materials through various investigations such as tea bag rockets, bicarb balloons, pop rockets. 6. Children will find out about Spencer Silver and Arthur Fry and the invention of the post it note. Children will use their findings to make their own</p>	<p>using knowledge of simple circuits. 6- Children to create a toy using more complicated components e.g. propellers, motors.</p> <p style="text-align: center;"><u>Light</u></p> <p>1. Dark den/box practical. History of light. Light maze activity. Use prisms to spot colour spectrum. 2. Know how a periscope works, how light is reflected and make own periscope. 3. Identify light sources. Explore if the moon is a light source. How does the eye work, how do we see? Children will look at optical illusions. Children will observe how the pupil reacts to light. Draw and label the eye. 4. Explain how we see things using diagrams. Experiment with shadows and changing the size of the shadow. Shadow investigation answering specific questions. 5. Refraction activities. Children will make their own magnifying glass and understand what refraction is. 6. Children will explore how rainbows are formed. Children will consolidate the language of the unit.</p>
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<p>3. Children explore floating and sinking, children carry out a simple test making predictions based on the different materials.</p> <p>4. Children to name different animals in the sea. Children to make observational drawings of animals who live in the sea.</p> <p><u>Minibeasts and growing</u></p> <p>1. Children to identify a caterpillar from photographs. Share the story of the hungry caterpillar. Look through the lifecycle of a caterpillar. Children to make their own lifecycles using models to explain the process.</p> <p>2. Reread the story and recap on key parts and the lifecycle. Focus on the foods that the caterpillar ate- can they recall them from the pictures? Do children know which of the foods/parts of the foods grow on plants? Taste testing of some of the foods. Look at how some foods are grown. Children to plant some of their own seeds.</p> <p>3. explore some science vocabulary around invertebrates, insects, minibeasts, arthropod, exoskeleton, segment. Children identify different minibeasts which belong to each group and see which ones they can find on a minibeast hunt.</p> <p>4. Children to identify</p>			<p>plant. Plant dissection and drawings.</p> <p>2. What do plants need to grow? recap. Experiment into the requirements of plant growth using pansys.</p> <p>3. Investigation on how water and nutrients transport through stem using carnations and celery. Photosynthesis.</p> <p>4. Recap on sunflower lifecycle and what germination means. Focus on pollination and pollination drama. Why are bees important?</p> <p>5. Fertilisation and seed dispersal. Focus on the different ways seeds are dispersed. Children make their own seed dispersed by wind.</p> <p>6. What is a botanist? – Children learn about different botanists. Children go on a seed hunt to see what they can find in their environment. End of unit quiz.</p>		<p>glue. Assessment test.</p> <p style="text-align: center;">Forces</p> <p>Recap previous learning- forces.</p> <p>Find out about Sir Isaac Newton.</p> <p>Learn about gravity and different forces by investigating different forces applied.</p> <p>2. Focus on gravity and space. Explore difference between weight and mass. Focus on Galileo and investigate time using pendulums.</p> <p>3. Investigate air resistance. Investigate effects of air resistance with parachutes.</p> <p>4. Investigation into water resistance.</p> <p>5. Investigate friction through slippy shoes investigation.</p> <p>6. Investigate levers, pulleys and gears through a range of activities.</p>	
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<p>shapes and patterns and sizes in minibeasts. Children to create their own minibeasts using their observations.</p> <p>5. Recap on lifecycles, recap on how animals change, look at adults and their young. Children to match the adult with its young.</p> <p>6. Children to make a minibeast home.</p> <p><u>Keeping Healthy</u></p> <p>1. Children will explore what might keep them healthy. Children to explore pictures and discuss. Introduce three pillars of healthy living. Children to draw a poster outlining what keeps them healthy.</p> <p>2. Introduce germs and how some can be helpful and others can be harmful. Children conduct a germ experiment to show how quickly germs can spread,</p> <p>3. talk to children about a balanced diet and the different groups that we get food from. Some foods are healthy and others we must eat in moderation. Children to make their own balanced lunch and understand how exercise keeps them healthy. Children complete exercises in the playground to show how it effects the body.</p> <p>4. Children will learn about the importance of sleep and importance of our mental health and</p>						
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emotions. Children to explore emotions and how people may be feeling at different stages. It is important to look after their emotions and also each other.

People who help us

1. Explore the job of a dentist, what does going to the dentist feel like and why do we need to look after our teeth? Children will conduct an experiment about the importance of brushing teeth.
2. Recap experiment from last time. Children will think more about why brushing their teeth is important.
3. Children to think about firefighters and what they do. How do they keep us safe? Why do fire fighters need to keep fit and healthy? Children are encouraged to be active and think about ways they exercise their muscles. Children to complete an assault course.
4. This lesson will focus on what a police officer does. Children will think about oxygen and how oxygen keeps fires alive. Children will be burning materials and observing closely.
5. This lesson focuses on what they should do in an emergency in terms of who to call and what to say to the operator, children

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should know their address and what is around them in their environment to help locate them.

6. Children will learn about the uniqueness of their finger prints and how they can be used to identify a person. Children will look closely at each other's finger prints and try to identify who touches the coffee cup using their observation skills.

Materials

1. Children have the opportunity to identify different materials. Children go on a material hunt to see if they can find the different materials in their environment.
2. Children will focus on the properties of different materials. Children will sort materials based on different properties.
3. This lesson will focus on how materials properties can change. Children to experience different changes in materials.
4. Children will be choosing appropriate materials to make a boat for Pinocchio.

Seasons.

1. Pre learning about seasons. Discuss different seasons. Read Seasons book and watch what are the seasons? Ask children what they like to do in each season and children record

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<p>their ideas.</p> <p>2. Recap seasons. Children will think about the leaves on a tree in different seasons and the reasons for this. Children to decorate their tree in their favourite season using appropriate seasonal colours.</p> <p>3. Children will go on a walk and identify things on the ID sheets, the walk will depend on the season you are learning this in- but advisable to repeat in each season.</p> <p>4. This lesson will focus on weather and typical weather for each season. Children to match the weather with the season.</p> <p>5. Children will be looking closely at leaves and will enjoy the story stick man. Children will create their own stick man and decorate to fit the season. Children will guess what season is their favourite.</p> <p>6. Assessment of all learning and environmental activities.</p>						
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Space Week

* Children are assigned a homework project that is linked to the theme of World Space Week. The children then present their homework in a whole school science fair.

British Science Week

* The whole school participates in science activities for one day during British Science week.

Space Night

* Parents and children are invited in to experience astronomy and a planetarium.