



Intent

Science teaching at Manor Park aims to give all children a strong understanding of the world around them whilst acquiring specific skills and knowledge to help them to think scientifically, to gain an understanding of scientific processes and also an understanding of the uses and application of Science, today and for the future.

All children are encouraged to develop and use a range of skills including observations, planning and investigations, as well as being encouraged to question the world around them and become independent learners in exploring possible answers for their scientific based questions. Specialist vocabulary for topics is taught and built up, and effective questioning to communicate ideas is encouraged. Concepts taught are reinforced by focusing on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions.

Knowledge of scientific processes is gained throughout a child's journey through school. Learning in Key Stage Two builds on prior learning in Key Stage One which, in turn, builds on solid foundations gained in the Early Years Foundation Stage. Our Science curriculum uses the National Curriculum to ensure that children gain the knowledge they need to become successful scientists at primary school and beyond, fostering an interest in the subjects – much needed by today's society.

Implementation

At Manor Park, scientific knowledge and enquiry skills are embedded in each Cornerstones project the children study and knowledge and skills are revisited and developed throughout their time at school. Topics, such as Plants, are taught in Key Stage One and studied again in further detail throughout Key Stage Two. This model allows children to build upon their prior knowledge and increases their enthusiasm for the topics whilst embedding this procedural knowledge into the long-term memory. In addition to the Science covered in Cornerstones projects, more formal science lessons are also taught weekly to ensure coverage and progress in all areas of Science.

To facilitate this learning process, teachers plan the following:

- A sequence of learning which builds on prior knowledge, skills and understanding;
- Opportunities to explore, revisit, understand and use technical vocabulary related to Science;
- A well thought out sequence of lessons for each subject that results in progression and depth;
- Trips and visiting experts who will enhance the learning experience;
- A means to display and celebrate the pupils' work in their class and finally a way to share their learning with parents and the local community.

Impact

Our Science Curriculum is high quality, well thought out and is planned to ensure progression. If children are keeping up with the curriculum, they are deemed to be making good progress in line with age related expectations.

In addition, we measure the impact of our curriculum through the following methods:

- A reflection on standards achieved against the planned outcomes;
- A celebration of learning for each term which demonstrates progression across the school;
- Pupil discussions about their learning - which includes discussion of their thoughts, ideas, processing and evaluations of work;
- Termly assessment against the progression document to assess if the child is working at age related expectations for Science.

National Curriculum

	ELGs	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p><i>Pupils should be taught:</i></p>	<ul style="list-style-type: none"> Explore the natural world around them, making observations and drawing pictures of animals and plants. 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. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. <p>Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</p>	<p><u>Working Scientifically</u></p> <ul style="list-style-type: none"> 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. <p><u>Plants</u></p> <ul style="list-style-type: none"> identify and name a variety of common wild and garden plants, including deciduous and evergreen trees identify and describe the 	<p><u>Working Scientifically</u></p> <ul style="list-style-type: none"> 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. <p><u>Living Things and their Habitats</u></p> <ul style="list-style-type: none"> explore and compare the differences between things that are living, dead, and things that have never been alive 	<p><u>Working Scientifically</u></p> <ul style="list-style-type: none"> 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 	<p><u>Working Scientifically</u></p> <ul style="list-style-type: none"> 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 	<p><u>Working Scientifically</u></p> <ul style="list-style-type: none"> 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, 	<p><u>Working Scientifically</u></p> <ul style="list-style-type: none"> 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

		<p>basic structure of a variety of common flowering plants, including trees.</p> <p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> • 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 senses <p><u>Everyday Materials</u></p>	<ul style="list-style-type: none"> • identify that most living things live in habitats to which they are suited and describe how different habitats 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><u>Plants</u></p> <ul style="list-style-type: none"> • observe and describe how seeds and bulbs grow into mature plants • find out and describe how 	<p>answering questions</p> <ul style="list-style-type: none"> • 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 	<p>answering questions</p> <ul style="list-style-type: none"> • 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 	<p>bar and line graphs</p> <ul style="list-style-type: none"> • 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. <p><u>Living Things and their Habitats</u></p> <ul style="list-style-type: none"> • describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird 	<ul style="list-style-type: none"> • 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. <p><u>Living Things and their Habitats</u></p> <ul style="list-style-type: none"> • describe how living things are classified into broad groups according to common observable characteristics and based on similarities and
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		<ul style="list-style-type: none"> 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 materials compare and group together a variety of everyday materials on the basis of their simple physical properties. <p><u>Seasonal Changes</u></p> <ul style="list-style-type: none"> observe changes across the four seasons <p>observe and describe weather associated with the seasons and how day length varies.</p>	<p>plants need water, light and a suitable temperature to grow and stay healthy.</p> <p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> 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><u>Uses of Everyday Materials</u></p> <ul style="list-style-type: none"> identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, 	<p>questions or to support their findings.</p> <p><u>Plants</u></p> <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><u>Animals including Humans</u></p> <ul style="list-style-type: none"> identify that animals, including humans, need 	<p>answer questions or to support their findings.</p> <p><u>Living Things and their Habitats</u></p> <ul style="list-style-type: none"> recognise that living things can be grouped in a variety of ways explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment recognise that environments can change and that this can sometimes pose dangers to living things. <p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> describe the simple functions of the basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions construct and interpret a 	<ul style="list-style-type: none"> describe the life process of reproduction in some plants and animals. <p><u>Animals Including Humans</u></p> <ul style="list-style-type: none"> describe the changes as humans develop to old age. <p><u>Properties and change of Materials</u></p> <ul style="list-style-type: none"> 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 materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution use knowledge of solids, 	<p>differences, including microorganisms, plants and animals</p> <ul style="list-style-type: none"> give reasons for classifying plants and animals based on specific characteristics. <p><u>Animals Including Humans</u></p> <ul style="list-style-type: none"> identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function describe the ways in which nutrients and water are transported within animals, including humans. <p><u>Evolution and Inheritance</u></p> <ul style="list-style-type: none"> recognise that living things
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			<p>rock, paper and cardboard for particular uses</p> <ul style="list-style-type: none"> find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching 	<p>the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat</p> <ul style="list-style-type: none"> identify that humans and some other animals have skeletons and muscles for support, protection and movement. <p><u>Rocks</u></p> <ul style="list-style-type: none"> 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 rock recognise that soils are made from rocks and organic matter <p><u>Light</u></p> <ul style="list-style-type: none"> recognise that they need light in order to see things and that 	<p>variety of food chains, identifying producers, predators and prey.</p> <p><u>States of Matter</u></p> <ul style="list-style-type: none"> compare and group materials together, according to whether they are solids, liquids or gases observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. <p><u>Sound</u></p> <ul style="list-style-type: none"> identify how sounds are made, associating some 	<p>liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p> <ul style="list-style-type: none"> 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 that this kind of change is not usually reversible, including changes associated with burning and 	<p>have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</p> <ul style="list-style-type: none"> 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. <p><u>Light</u></p> <ul style="list-style-type: none"> recognise that light appears to travel in straight lines use the idea that light travels in straight lines to explain that objects are seen because they
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				<p>dark is the absence of light</p> <ul style="list-style-type: none"> notice that light is reflected from surfaces recognise that light from the sun can be dangerous and that there are ways to protect their eyes recognise that shadows are formed when the light from a light source is blocked by an opaque object find patterns in the way that the size of shadows change. <p><u>Forces and Magnets</u></p> <ul style="list-style-type: none"> compare how things move on different surfaces notice that some forces need contact between two objects, but magnetic forces can act at a distance observe how magnets attract or repel each other and attract some materials and not others 	<ul style="list-style-type: none"> of them with something vibrating recognise that vibrations from sounds travel through a medium to the ear find patterns between the pitch of a sound and features of the object that produced it find patterns between the volume of a sound and the strength of the vibrations that produced it recognise that sounds get fainter as the distance from the sound source increases. <p><u>Electricity</u></p> <ul style="list-style-type: none"> 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 	<p>the action of acid on bicarbonate of soda.</p> <p><u>Earth and Space</u></p> <ul style="list-style-type: none"> 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 the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. <p><u>Forces</u></p> <ul style="list-style-type: none"> explain that unsupported objects fall towards the Earth because of the force of gravity acting between the 	<ul style="list-style-type: none"> 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 objects that cast them. <p><u>Electricity</u></p> <ul style="list-style-type: none"> 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
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				<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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>Earth and the falling object</p> <ul style="list-style-type: none"> 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>on/off position of switches</p> <ul style="list-style-type: none"> use recognised symbols when representing a simple circuit in a diagram.
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Skills Progression

Skill	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working Scientifically (skills)	<p>Explore materials with different properties.</p> <p>Explore natural materials indoors and outside.</p>	Ask simple questions and recognising that they can be answered in different ways	Ask simple questions and recognising that they can be answered in different ways	Ask relevant questions and using different types of scientific enquiries to answer them	Ask relevant questions and using different types of scientific enquiries to answer them	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	<p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Take measurements, using a range of scientific equipment, with increasing</p>

<p>Use all their senses in hands on exploration of natural materials.</p> <p>Explore a collection of materials with similar and/or different properties.</p> <p>Begin to understand the need to respect and care for the natural environment and all living things.</p> <p>Explore and talk about different forces they can feel.</p> <p>Talk about the differences between materials and changes they notice.</p> <p>Explore the natural world around them.</p> <p>Understand the effect of the changing seasons around them.</p>	<p>Observe closely, using simple equipment</p> <p>Perform simple tests</p> <p>Identify and classify</p> <p>Use their observations and ideas to suggest answers to questions</p> <p>Gather and record data to help in answering questions.</p>	<p>Observe closely, using simple equipment</p> <p>Perform simple tests</p> <p>Identify and classify</p> <p>Use their observations and ideas to suggest answers to questions</p> <p>Gather and record data to help in answering questions</p>	<p>Set up simple practical enquiries, comparative and fair tests</p> <p>Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>Gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p>	<p>Set up simple practical enquiries, comparative and fair tests</p> <p>Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>Gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of</p>	<p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p> <p>Use test results to make predictions to set up further comparative and fair tests</p> <p>Report and present 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</p> <p>Identify scientific evidence that has been used to support or refute ideas or arguments.</p>	<p>accuracy and precision, taking repeat readings when appropriate</p> <p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p> <p>Use test results to make predictions to set up further comparative and fair tests</p> <p>Report and present 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</p> <p>Identify scientific evidence that has been used to support or refute ideas or arguments.</p>
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				<p>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p>	<p>results and conclusions</p> <p>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p>		
Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants	<p>Plant seeds and care for growing plants.</p> <p>Understand the key features of the life cycle of a plant and animals.</p>	Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees	<p>Observe and describe how seeds and bulbs grow into mature plants</p> <p>Find out and describe how plants need water, light and a suitable</p>	<p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>Explore the requirements of plants for life and</p>			

	<p>Begin to understand the need to respect and care for the natural environment and all living things.</p> <p>Explore the natural world around them.</p> <p>Understand the effect of the changing seasons around them.</p>	<p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p>	<p>temperature to grow and stay healthy.</p>	<p>growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant</p> <p>Investigate the way in which water is transported within plants</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>			
Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Animals including Humans	<p>Understand the key features of the life cycle of a plant and an animal.</p> <p>Begin to understand the need to respect and care for the natural environment and all living things.</p> <p>Talk about the differences between materials and</p>	<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>Describe and compare the</p>	<p>Notice that animals, including humans, have offspring which grow into adults</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>Describe the importance for</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</p> <p>Identify the different types of teeth in humans and their simple functions</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p>Describe the changes as humans develop to old age.</p>	<p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans.</p>

	<p>changes they notice.</p> <p>Explore the natural world around them.</p>	<p>structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each senses</p>	<p>humans of exercise, eating the right amounts of different types of food, and hygiene.</p>				
Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Living Things and their Habitats	<p>Explore the natural world around them.</p> <p>Understand the effect of the changing seasons around them.</p> <p>Understand the key features of the life cycle of a plant and an animal.</p>		<p>Explore and compare the differences between things that are living, dead, and things that have never been alive</p> <p>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the</p>		<p>Recognise that living things can be grouped in a variety of ways</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>Describe the life process 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 microorganisms, plants and animals</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>

			<p>basic needs of different kinds of animals and plants, and how they depend on each other</p> <p>Identify and name a variety of plants and animals in their habitats, including microhabitats</p> <p>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>				
Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Materials and States of Matter	<p>Explore natural materials indoors and outside.</p> <p>Use all their senses in hands on exploration of natural materials.</p>	<p>Distinguish between an object and the material from which it is made</p> <p>Identify and name a variety of everyday materials,</p>	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and</p>		<p>Compare and group materials together, according to whether they are solids, liquids or gases</p> <p>Observe that some materials change state when they</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>Explore a collection of materials with similar and/or different properties.</p> <p>Talk about the differences between materials and changes they notice.</p> <p>Explore the natural world around them.</p>	<p>including wood, plastic, glass, metal, water, and rock</p> <p>Describe the simple physical properties of a variety of everyday materials</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	<p>cardboard for particular uses</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</p>			<p>are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes</p> <p>Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action</p>	
Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Seasonal Changes	<p>Explore the natural world around them.</p> <p>Understand the effect of the changing seasons around them.</p>	<p>Observe changes across the four seasons</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p>						
Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
Light				<p>Recognise that they need light in order to see things and that dark is the absence of light</p> <p>Notice that light is reflected from surfaces</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p> <p>Recognise that shadows are formed when the light from a light source is blocked by an opaque object</p> <p>Find patterns in the way that the size of shadows change.</p>				<p>Recognise that light appears to travel in straight lines</p> <p>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</p> <p>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</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>

Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Forces	Explore and talk about different forces they can feel.			<p>Compare how things move on different surfaces</p> <p>Notice that some forces need contact between two objects, but magnetic forces can act at a distance</p> <p>Observe how magnets attract or repel each other and attract some materials and not others</p> <p>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</p> <p>Describe magnets as having two poles</p> <p>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</p> <p>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>	
Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Rocks				<p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock</p> <p>Recognise that soils are made from rocks and organic matter</p>			
Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Electricity					<p>Identify common appliances that run on electricity</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</p> <p>Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is</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</p> <p>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</p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p>

					<p>part of a complete loop with a battery</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors.</p>		
Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Sound					<p>Identify how sounds are made, associating some of them with something vibrating</p> <p>Recognise that vibrations from sounds travel through a medium to the ear</p> <p>Find patterns between the pitch of a sound and features of the object that produced it</p>		

					<p>Find patterns between the volume of a sound and the strength of the vibrations that produced it</p> <p>Recognise that sounds get fainter as the distance from the sound source increases.</p>		
Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Earth and Space						<p>Describe the movement of the Earth, and other planets, relative to the Sun in the solar system</p> <p>Describe the movement of the Moon relative to the Earth</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies</p> <p>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</p>	
Curriculum Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Evolution and Inheritance								<p>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>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</p>
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Science Whole School Knowledge Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
N	<p>Who am I?</p> <p>I know the names of some body parts.</p>	<p>What changes can we see?</p> <p>I know that my body changes physically over time.</p> <p>I know of some noticeable changes in the environment each season.</p>	<p>How does this building stay up?</p> <p>I know which materials would be appropriate to build a tower.</p> <p>I know which materials soft and which materials are hard.</p>	<p>Is it shiny?</p> <p>I know how to explore different materials using my senses.</p> <p>I know some words to describe materials with similar properties.</p>	<p>How many colours are in a rainbow?</p> <p>I know how a rainbow is formed</p> <p>I know the colours of some of the things I have observed such as plants, animals, natural and found objects.</p>	<p>How many pebbles are on a beach?</p> <p>I know how to make predictions about what will float or sink</p> <p>I know how to test if something will float or sink</p> <p>I know the similarities and differences between some natural objects.</p>

		I know of some of the characteristics of a baby and that I had those characteristics as baby.	I know the name of some man-made and natural materials.		I know how why some things happen and how things work.	I know some of some of the living things that can be found on the beach. I know that fish live in the sea.
EYFS	Who are we? I know that I have similarities and differences that connect me to, and distinguish me from, others.	Who are the people that help us? I know that some people have jobs where they help us. I know some simple facts about how dentists, nurses and doctors help us. I know that there are things that I need to do to keep myself fit and healthy.	How can we care for our world? I know that I can help to look after the environment. I know that there are actions that I can take to keep my immediate and local environment clean and safe. I know that things change over time and can help to preserve them. I know some facts about growth, decay and changes over time.	Where do we live? I know how to help keep my environment clean and safe. I know that animals and plants are important to human beings. I know how to show care and concern for living things and the environment. I know of the effect of changing seasons around me. I know which animals we can find in our local area.	How do we move around? I know how to make a moving object go faster. I know how to investigate forces in toys such as pulleys, cogs, and wind-up toys. I know that repeated actions can have an effect. I can talk about why things happen and how things work.	Why do we love water? I know that water is needed for life in plants, animals and humans. I know how water affects the life cycle of a plant and animal. I know that I can use water to carry out simple experiments I know that water can be heated, cooled and frozen. I know the main uses of water in my household. I know which animals and plants live in the sea.

Y1

Superheroes

Seasonal Changes

I know what happens in different seasons.

I know which objects can match to each season.

I know what happens to the day length in different seasons.

Working Scientifically

I know how to use my observations to help answer a question.

I know how to gather data to create a day length pictogram.

London's Burning!

Everyday Materials

I know the properties of different materials.

I know the similarities and differences between the physical properties of everyday materials.

I know the difference between man-made and natural.

I know which materials are absorbent.

I know which materials are waterproof.

I know which materials are transparent and opaque.

Working Scientifically

I know how to observe my investigation closely, using simple tests.

I know how to perform simple tests to check absorbency, transparency,

Twinkle, twinkle little star

Everyday Materials

I know the properties of different materials and a matching adjective.

I know what different materials are used for.

Seasonal Changes

I know the similarities and differences between different seasons.

I know the earth, sun and moon in the solar system.

Working Scientifically

I know how to ask a simple question.

I know how to use my observations and ideas to suggest answers to questions.

Dinosaurs: Dangerous or Delicate?

Animals including Humans

I know the names and features of different reptiles.

I know the difference between carnivores and herbivores.

I know how animal's teeth link to their diet.

I know the similarities and differences of body parts that dinosaurs had.

Seasonal Changes

I know the difference between spring and winter.

What's in the woods?

Plants

I know the different parts of a wild flowering plant and what each part does.

I know what plants need to grow.

I know the names of a variety of common wild and garden plants.

I know the difference between trees and flowering plants.

I know the difference between deciduous and evergreen trees.

Working Scientifically

I know how to plant cress seeds and other vegetables and observe the results closely.

Fur, Feathers, Scales and Skin

Animals including Humans

I know the basic parts of the human body.

I know the difference between fish and amphibians.

I know a variety of animals that are carnivores, herbivores and omnivores.

I know that there is variation between humans' hair colours.

I know what camouflaged means.

Seasonal Changes

I know the difference between spring and summer.

		<p>opaqueness and whether a material is waterproof.</p> <p>I know how to identify and classify.</p>				
Y2	<p>Once Upon a Castle</p> <p>Materials and States of Matter</p> <p>I know the properties of a variety of everyday materials and objects.</p> <p>I know the similarities and differences of a variety of everyday materials.</p> <p>I know the material that different objects are made from.</p> <p>I know why certain materials are chosen for different objects.</p> <p>I know how the shapes of solid objects made from some materials can be changed.</p> <p>I know the best materials to use to</p>	<p>Victorians: Victorious or Vile?</p> <p>Covered in other units</p>	<p>Land Ahoy</p> <p>Materials and States of Matter</p> <p>I know that different everyday materials have different levels of buoyancy.</p> <p>I know different materials that boats are made from.</p> <p>I know which shapes of solids can be changed and which float best.</p> <p>I know which materials and shapes will work best when creating my own raft.</p> <p>Working Scientifically</p> <p>I know how to perform a simple test to see which materials float and sink.</p> <p>I know how to make a prediction about which</p>	<p>Awesome Aston</p> <p>Living Things and their Habitats</p> <p>I know what a food chain is.</p> <p>I know some wildlife in Aston and how they are part of the food chain.</p> <p>I know how humans have affected the wildlife in Aston.</p> <p>I know what causes pollution around the world.</p> <p>I know about pollution in my local area.</p> <p>I know how to make changes to improve my local area.</p> <p>I know how the pollution in canals affects wildlife.</p> <p>Working Scientifically</p>	<p>Bloomin' Marvellous</p> <p>Plants</p> <p>I know seeds and bulbs grow into mature plants by observing the growth of my own sunflower seeds and beans.</p> <p>I know what plants need to grow and stay healthy.</p> <p>I know the difference between seeds and bulbs.</p> <p>I know the different parts of a plant.</p> <p>I know about the lifecycle of a plant.</p> <p>I know what kind of liquid a plant needs to survive and stay healthy.</p> <p>Working Scientifically</p>	<p>Wriggle, Crawl, Fly!</p> <p>Animals including Humans</p> <p>I know how and why insects camouflage themselves.</p> <p>I know what a caterpillar needs to survive and to become a butterfly.</p> <p>I know the difference between the life cycle of a butterfly and a bee.</p> <p>Living Things and their Habitats</p> <p>I know some different minibeasts.</p> <p>I know how a microhabitat is suited to a particular minibeast and what it needs to include.</p> <p>I know how a microhabitat provides for the basic needs or different insects.</p> <p>I know what a minibeast will need in its microhabitat.</p>

	<p>build all aspects of my own strong mini-catapult.</p> <p>Working Scientifically</p> <p>I know how to gather and record data to answer a scientific question.</p> <p>I know how to record findings about properties of different materials in a table.</p> <p>I know how to perform a simple test to see which materials can be changed using different actions.</p> <p>I know how to record data using a Venn diagram.</p>		<p>materials will sink or float.</p> <p>I know how to gather and record data to answer a scientific question.</p> <p>I know how to perform a simple test to explore which shapes float best. I know how to observe closely, using simple equipment to answer a scientific question.</p> <p>I know how information can be recorded using a variety of tally charts and bar charts.</p>	<p>I know how to perform a simple test to find out how pollution affects wildlife.</p>	<p>I know what happened to my seeds and beans by observing them closely and recording findings.</p> <p>I know how to gather and record data to answer a scientific question.</p> <p>I know how to make a prediction about what will happen to different plants.</p> <p>I know how to perform simple tests to investigate what plants need to survive and be healthy.</p>	<p>I know that things can be living, dead or never alive and how to identify these.</p> <p>Working Scientifically</p> <p>I know how to identify and classify whether something is living, dead or never alive.</p>
<p>Y3</p>	<p>Rock and Roll</p> <p>Rocks</p> <p>I know the differences between igneous, sedimentary and metamorphic rocks.</p> <p>I know the difference between natural and man-made rocks.</p>	<p>Crunch! Crack! Clang!</p> <p>Forces and Magnets</p> <p>I know what friction is.</p> <p>I know that different surfaces cause friction that can affect the speed of an object.</p>	<p>Greeks: Groovy or Gruesome?</p> <p>Covered in other units.</p>	<p>Tudors: Tame or Terrifying?</p> <p>Light</p> <p>I know that we need light in order to see things.</p> <p>I know that dark is the absence of light.</p>	<p>Remarkable Rainforest</p> <p>Plants</p> <p>I know the names of different parts of a plant and their functions.</p> <p>I know what plants need for life and growth.</p>	<p>Zootopia</p> <p>Animals including Humans</p> <p>I know what types and amounts of nutrition animals and humans need.</p> <p>I know what a skeleton is.</p> <p>I know why animals have skeletons.</p>

	<p>I know the similarities and differences between different kinds of rocks using appearance and simple physical properties.</p> <p>I know what body fossils and trace fossils are.</p> <p>I know how fossils are formed.</p> <p>I know what palaeontology is and what a palaeontologist does. I know how soil is formed and different types of soil.</p> <p>Working Scientifically</p> <p>I know how to observe to see which rocks are most permeable, durable and buoyant.</p>	<p>I know that magnets attract or repel each other and some materials and not others.</p> <p>I know which materials are attracted to a magnet and which materials are magnetic.</p> <p>I know that magnetic forces can act at a distance.</p> <p>I know that magnets have two poles.</p> <p>I know how magnets are used in everyday life.</p> <p>Working Scientifically</p> <p>I know how to set up a practical enquiry and a fair test to investigate the speed of a car on different surfaces.</p> <p>I know how to make careful observations and take accurate measurements using standard units with scientific equipment.</p>		<p>I know that light is reflected from surfaces, including mirrors.</p> <p>I know that light from the Sun can be dangerous.</p> <p>I know how to protect my eyes from the Sun.</p> <p>I know how light travels.</p> <p>I know the difference between opaque, translucent and transparent objects.</p> <p>I know how shadows are formed.</p> <p>Working Scientifically</p> <p>I know how to ask relevant questions.</p> <p>I know how to set up a simple practical enquiry to find out the effect of UV light.</p> <p>I know how to test different materials to find the most opaque.</p> <p>I know that my results can help me to draw a simple conclusion about how shadows change.</p>	<p>I know how water is transported within plants.</p> <p>I know what each part of the flower plays in the life cycle of a flowering plant.</p> <p>I know what pollination and fertilisation is.</p> <p>I know the different methods of seed dispersal.</p> <p>Working Scientifically</p> <p>I know how to create a question for my plant investigation.</p> <p>I know how to set up simple practical enquiries, comparative and fair tests.</p> <p>I know how to make careful observations and take accurate measurements using standard units with scientific equipment.</p> <p>I know how to record my findings using simple scientific language.</p>	<p>I know the difference between vertebrate and invertebrate.</p> <p>I know whether an animal is an invertebrate or vertebrate.</p> <p>I know the common names of the human bones.</p> <p>I know the difference between bones and muscles.</p>
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		<p>I know how to gather, and record data collected for the speeds of the cars.</p> <p>I know how to report my findings on the best surface for the speed of the car.</p> <p>I know how to explain my findings orally about magnets.</p> <p>I know how to present my findings about the strengths of different magnets using a bar chart.</p> <p>I know how to predict whether two magnets will attract or repel each other.</p> <p>I know how to evaluate the effectiveness of my magnetic game.</p>		<p>I know how to identify differences, similarities or changes related to simple scientific ideas and processes.</p>	<p>I know how to report on my findings from the plant investigation as a television programme.</p> <p>I know how to write a conclusion to the flower experiment.</p>	
Y4	<p>Smashing Saxons, Vicious Vikings</p> <p>Materials and States of Matter</p> <p>I know the difference between a solid, liquid and a gas.</p>	<p>Inside your insides</p> <p>Animals including Humans</p> <p>I know the names of different teeth and their functions.</p>	<p>Dive into the deep</p> <p>Animals including Humans</p> <p>I know what a producer, predator and prey is.</p>	<p>Islamic Intrigue</p> <p>Covered in other units.</p>	<p>Natural Rhythm</p> <p>Sound</p> <p>I know what vibrations are and how they travel through a medium to the ear.</p>	<p>Route 66</p> <p>Electricity</p> <p>I know what electricity is and why it is important.</p> <p>I know how electricity is powered.</p>

<p>I know the properties of solids, liquids and gases.</p> <p>I know which materials are solids, liquids and gases.</p> <p>I know what happens when a sweet is dropped into a fizzy drink.</p> <p>I know what happens when chocolate is melted and cooled.</p> <p>I know what happens when a liquid is frozen.</p> <p>I know what happens at each stage in the water cycle.</p> <p>I know what evaporation and condensation is.</p> <p>Working Scientifically</p> <p>I know how to make careful observations of the balloons filled with ice, water and air.</p>	<p>I know how different drinks can effect teeth.</p> <p>I know how toothpaste can help clean decay.</p> <p>I know what the digestive system is.</p> <p>I know the similarities and differences between the human digestive system and other animals' digestive system.</p> <p>I know the different parts of the digestive system.</p> <p>I know the functions of different parts of the digestive system.</p> <p>Working Scientifically</p> <p>I know how to make careful observations of the effect of different drinks on our teeth.</p> <p>I know how to set up an investigation to find out how toothpaste can help clean teeth.</p>	<p>I know which living things are producers, predators and prey.</p> <p>I know what a food chain is.</p> <p>I know what a food web is.</p> <p>I know what producers, predators and prey are in a given food chain and food web.</p> <p>Living Things and their Habitats</p> <p>I know that living things can be grouped in a variety of ways.</p> <p>I know how scientists use similarities and differences as a basis for organising animals.</p> <p>I know how to organise animals into the major groups.</p> <p>I know what a classification key is.</p> <p>I know that a classification key can be used to group living things according to their features.</p>			<p>I know how musical instruments make sound.</p> <p>I know how the shape of an ear affects how we hear sounds.</p> <p>I know how different sounds are made, including higher and lower pitch.</p> <p>I know why some materials are better for sound to travel through than others.</p> <p>I know that the length of the vibration can affect the sound.</p> <p>I know how distance can affect the sound.</p> <p>Working Scientifically</p> <p>I know how to make careful observations of the different types of sounds from instruments.</p> <p>I know how to identify higher and lower pitch sounds from different instruments.</p>	<p>I know which appliances need electricity.</p> <p>I know some different types of energy and how they work.</p> <p>I know the names of basic parts of a circuit.</p> <p>I know what makes a complete circuit.</p> <p>I know why a switch is important in a circuit and what it does.</p> <p>I know what would happen if there was a break in the circuit.</p> <p>I know what a conductor and insulator is.</p> <p>I know why metals are good conductors.</p> <p>I know which materials are good conductors or insulators.</p> <p>I know which objects are good conductors or insulators and why.</p> <p>Working Scientifically</p>
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	<p>I know how to ask questions about whether different items are solid, liquid or gas.</p> <p>I know how to make careful observations of effect of the sweet dropped into a fizzy drink.</p> <p>I know how to set up an investigation to fine out the time it takes for different types of chocolate to melt.</p> <p>I know how to take measurements of the time it takes the chocolate to melt.</p> <p>I know how to record my findings of the time it takes chocolate to melt.</p> <p>I know how to make predictions about an investigation.</p>		<p>Working Scientifically</p> <p>I know how to observe different minibeasts, including looking at mouthparts and feeding.</p> <p>I know how to classify animals in different ways.</p>		<p>I know how to measure sound in decibels using a data logger.</p> <p>I know how to take repeated measurements for accuracy.</p> <p>I know how to use the average measurement (median).</p> <p>I know how to investigate the mechanism of sound by lengthening and shortening the range of vibrations using guitar strings and straws.</p>	<p>I know how to set up a comparative test to find out which materials and objects are good conductors and insulators.</p> <p>I know how to make observations of different materials and objects.</p>
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Y5

Egyptians: Eccentric or Eerie?

Covered in other units.

To infinity and beyond

Forces

I know what gravity is.

I know why unsupported objects fall towards the Earth.

Earth and Space

I know the movement of the planets in relation to the Sun.

I know the order of the planets in our solar system.

I know the movement of the Moon in relation to the Earth.

I know what waxing, waning, new and full mean in relation to the Moon.

I know what a lunar month is.

I know why we have day and night and how the Earth orbits the Sun.

I know what an elliptical orbit is.

Romans: Rampaging or Resplendent?

Covered in other units.

King Coal

Properties and changes of materials

I know the similarities and differences of properties of everyday materials.

I know the differences between man-made and synthetic materials.

I know if a material is soluble, magnetic or conductive.

I know that some mixtures can be separated through filtering, sieving and evaporating.

I know the difference between reversible and irreversible.

I know that dissolving, mixing and changes of state are reversible changes.

I know some changes result in the formation of new materials, and that this kind of change is not usually reversible.

Feel the Force!

Forces

I know different types of forces.

I know which forces affect a moving object.

I know how an increased surface area decreases the speed an object moves.

I know the effects of air resistance, water resistance and friction between moving surfaces.

I know how to make an object aerodynamic.

I know how to ensure a ride at my theme park goes as fast as it can.

Working Scientifically

I know how to plan a scientific enquiry to find out how an increased surface area decreases the speed an object moves.

Metamorphosis

Animals including Humans

I know how humans change as they get older.

I know some of the signs of old age.

Living Things and their Habitats

I know the similarities and differences between animals' life cycles.

I know how different animals are suitable for their environment and habitat.

I know the difference between asexual and sexual reproduction in plants.

I know the different parts of a dissected, real life flower.

I know how plants disperse seeds.

Working Scientifically

I know how to produce a lifecycle wheel to present information.

		<p>I know why we have seasons.</p> <p>Working Scientifically</p> <p>I know how to plan a scientific enquiry to find out how gravity affects objects on Earth.</p> <p>I know what a variable is and how to control it with objects of different sizes and weights.</p> <p>I know how to use scientific equipment and can take repeated readings.</p> <p>I know how to record data.</p>		<p>Working Scientifically</p> <p>I know how to plan a scientific enquiry to test if a material is soluble, magnetic or conductive.</p> <p>I know how to plan a scientific enquiry to investigate the separation of tea leaves from water.</p> <p>I know how to plan a scientific enquiry to investigate whether salt dissolved in water can be reversed.</p> <p>I know how to predict whether a change is reversible or irreversible.</p> <p>I know how to use scientific equipment and can take repeated readings.</p> <p>I know how to record data using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p>	<p>I know how to plan a scientific enquiry to find out how friction affects a moving object.</p> <p>I know how to use record findings using time.</p> <p>I know what a variable is and how to control it.</p> <p>I know how to use scientific equipment and can take repeated readings.</p> <p>I know how to record data using a bar graph.</p> <p>I know how test results can make predictions to set up further comparative and fair tests.</p> <p>I know how to record my findings using an explanation text with diagrams.</p>	<p>I know how to use scientific equipment and can take repeated readings.</p> <p>I know what a variable is and how to control it.</p> <p>I know how to investigate the different ways that plants disperse seeds.</p>
Y6	<p>Making an impression</p> <p>Living Things and their Habitats</p>	<p>WW2: What, where, who?</p> <p>Light</p>	<p>Origins</p> <p>Evolution and Inheritance</p>	<p>Brilliant Blood</p> <p>Animals including Humans</p>	<p>Culture and Community</p> <p>Electricity</p>	<p>Sun, Sombreros and Skulls</p> <p>Covered in other units.</p>

	<p>I know about the seven levels of the Linnaeus' system.</p> <p>I know the first layer 'Kingdom' of the Linnaeus' system.</p> <p>I know what microorganisms are and why they are important.</p> <p>I know what a vertebrate and an invertebrate is and why.</p> <p>I know how to use a classification key.</p> <p>I know how animals can be classified.</p> <p>Working Scientifically</p> <p>I know how to predict what types of living things are in different areas of the school.</p> <p>I know how to classify a variety of plants.</p> <p>I know how to compare woodland area.</p>	<p>I know that light travels in straight lines.</p> <p>I know why shadows have the same shape as the objects that cast them.</p> <p>I know how the Sun causes shadows.</p> <p>I know what transparent, translucent and opaque mean and why they are used.</p> <p>I know how light is affected by transparent, translucent and opaque objects.</p> <p>I know that objects are seen because they give out or reflect light into the eye.</p> <p>Working Scientifically</p> <p>I know how to predict the effect of light on a variety of objects.</p> <p>I know how to set up an investigation about the properties of</p>	<p>I know the difference between environmental and inherited characteristics.</p> <p>I know how animals are adapted to suit their environment in different ways.</p> <p>Working Scientifically</p> <p>I know how to set up an investigation to find out how a finches' beak works.</p> <p>I know how to predict which utensil will be best to catch the most jellybeans out of the flour.</p> <p>I know how to use my results to analyse which utensil was the best match to the finch's beak and why.</p>	<p>I know the main parts of the human circulatory system.</p> <p>I know the functions of the heart, blood vessels and blood.</p> <p>I know how nutrients and water are transported in the human body.</p> <p>I know the impact of a healthy lifestyle.</p> <p>I know the impact of drugs on the human body.</p> <p>I know what endoskeleton, exoskeleton and hydrostatic skeleton mean.</p> <p>I know the difference between cells, tissues and muscles.</p> <p>I know how muscles work.</p> <p>Working Scientifically</p> <p>I know how to take measurements using scientific equipment.</p>	<p>I know which symbols to use when representing a simple circuit in a diagram.</p> <p>I know the effect of the voltage of cells used in a circuit on the brightness of a lamp or the volume of a buzzer.</p> <p>Working Scientifically</p> <p>I know how to use a drawing to prepare for setting up an investigation.</p> <p>I know how to use an investigation to predict how to make a bulb brighter or dimmer.</p>	
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transparent,
translucent and
opaque objects.

I know how to
investigate the effect
of light on a variety of
different objects.

I know how to evaluate
my findings.

I know how to record
my results in a Venn
diagram.

I know how to record
data and results on a line
graph.



Science Vocabulary Progression

*Some vocabulary reoccurs in more than one year group and all vocabulary is revisited to ensure secure vocabulary acquisition.

<p>EYFS</p>	<p>Who are we? Body parts, family, relative, group, belong, different, community,</p> <p>Who helps us? Names of different professionals that help us, jobs, help, friendly, clean, local environment.</p> <p>How do we care for our world? Clean, recycle, reuse, environment, animals, minibeasts,</p> <p>Where do we live? Local environment, animals, houses, bricks, stone, materials, recycle, plastic, buildings, nature.</p> <p>How do we travel? Names of modes of transport, pull, forces, wheels, engine, water, boats,</p> <p>Why do we love water? Beach, weather, recycle, freeze, evaporate, wet, dry, changes, thick, runny, slimy</p>
<p>Y1</p>	<p>Superheroes Weather, season, spring, summer, autumn, winter, day, match, trees, leaves, animals, seeds, weather, clothes, pictogram, senses.</p> <p>London's Burning! Material, properties, man-made, natural, wood, plastic, glass, metal, transparent, absorbent, opaque, waterproof</p> <p>Twinkle, twinkle little star Space, star, rocket, planet, Moon, Earth, Sun, season, orbit, International Space Station, alien, hard, sticky, slimy, magnetic, cold, rocket, furthest, largest, smallest, Solar System</p> <p>What's in the woods? Plant, seeds, vegetables, flower, grow, garden, tree, deciduous, evergreen, woodland habitat, local environment, leaf, leaves, flower, petal, seed, root, stem, cress, bark, pattern</p> <p>Dinosaur Planet Reptile, carnivore, herbivore, diet, body part, dinosaur, feature, teeth, diet, fern, conifer, Jurassic, Triassic</p> <p>Fur, Feathers, Scales and Skin</p>

	Human body, fish, amphibian, carnivore, herbivores, omnivore, camouflage, habitat, food, environment
Y2	<p>Once Upon a Castle Property, material, similarity, difference, object, solid, catapult, knights, castle, plastic, rubber, fabric, clay, string, wooden, sponge, metal, rock</p> <p>Land Ahoy Float, sink, prediction, tally chart, bar chart, buoyancy, material, raft, boat, wood, plastic, metal, glass, brick, paper, card, solid, float, sink</p> <p>Bloomin' Marvellous Seeds, beans, plants, growth, healthy, sunflower, soil, stem, leaves, petal, root, life cycle, bulbs, light, water</p> <p>Wriggle, Crawl, Fly Classify, living, dead, alive, camouflage, caterpillar, butterfly, difference, minibeast, microhabitat, identify, lifecycle,</p> <p>Awesome Aston Food chain, wildlife, human, pollution, world, environment, recycling, reusing</p>
Y3	<p>Rock and Roll Rock, permeable, durable, buoyant, igneous, sedimentary, metamorphic, appearance, physical, fossils, palaeontology, palaeontologist, soil, hard, rough, smooth, high density, low density, dinosaur, fossil, body fossil, trace fossil, fossilisation, formation,</p> <p>Crunch! Crack! Clang! Investigate, surface, measurement, scientific, equipment, magnet, attract, repel, friction, force, distance, pole, faster, slower, speed, magnetic,</p> <p>Remarkable Rainforest Comparative, fair, conclusion, function, transported, pollination, fertilisation, seed dispersal, plant, prediction, measure, height, water, temperature, flower, lifecycle</p> <p>Tudors: Tame or Terrifying? Relevant, UV light, opaque, shadow, light, dark, reflected, surface, Sun, travel, shadow, opaque, translucent, transparent, reflective,</p> <p>Zootopia Nutrition, animal, human, skeleton, vertebrate, invertebrate, common, bone, muscle, food, food group, carnivore, herbivore, omnivore</p>
Y4	<p>Smashing Saxons, Vicious Vikings Balloon, ice, water, air, solid, liquid, gas, melt, cooled, frozen, water cycle, evaporation, condensation, state of matter</p> <p>Inside your insides Teeth, toothpaste, decay, digestive system, function</p> <p>Dive into the deep</p>

	<p>Minibeast, mouthpart, feeding, producer, predator, prey, food web, food chain, classification key, feature</p> <p>Natural Rhythm Instrument, higher, lower, pitch, decibel, data logger, median, lengthen, shorten, vibration, ear, sound, length, distance, travel</p> <p>Route 66 Conductor, insulator, electric, electricity, power, appliance, energy, circuit, switch, metal,</p>
<p>Y5</p>	<p>To infinity and beyond Variable, data, gravity, Earth, planet, Sun, Solar System, Moon, day, night, orbit, season, Space Station, Lunar, waxing, waning, new, full, globe, light source, elliptical orbit</p> <p>Metamorphosis Lifecycle, environment, habitat, asexual, sexual, reproduction, disperse, dissect</p> <p>King Coal, Material, soluble, magnetic, conductive, separate, filter, sieve, evaporate, reversible, irreversible, dissolve, mixing, state, wool, cotton, cork, stone, glass, powder, metal, sand, wax, synthetic</p> <p>Feel the Force! Force, air resistance, water resistance, gravity, surface area, win resistance, aerodynamic, friction, bar chart</p>
<p>Y6</p>	<p>Making an impression Linnaeus' system, microorganism, classification key, vertebrates, invertebrates</p> <p>WW2: What, where, who? Light, straight, shadow, Sun, transparent, translucent, opaque, reflect, shape, intensity, angle</p> <p>Origins Environmental, inherited, characteristic, adapt, adaptations, sculpt</p> <p>Brilliant Blood Circulatory system, heart, blood vessel, blood, nutrients, transport, impact, lifestyle, drugs, endoskeleton, exoskeleton, hydrostatic, cells, tissues, muscles, dissect, digestion,</p> <p>Culture and Community Brighter, dimmer, symbol, represent, diagram, voltage, cells</p>