

Martlesham Primary Academy
Science Curriculum



To note:

- Some areas of the science curriculum will be covered in the year group prior or year group after that which is stated due to the mixed year-group classes which Martlesham Primary Academy has due to cohort numbers. As the structure of the classes changes each year due to numbers of pupils in each year group, this may change the year group the children experience this learning and cannot therefore be put onto a two-year cycle.
- The main learning is included within this progression. Extra knowledge linked to the specific lesson is shown on the medium-term plans.

Working Scientifically

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
National Curriculum Objectives	Explore the natural world around them making observations and drawing pictures of animals and plants.	<p><i>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</i></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><i>During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</i></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 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 		<p><i>During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</i></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 -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 a 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 	

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Questioning	Ask a relevant scientific question to find out more, explain how things work and why they might happen.	Ask simple scientific questions.	Ask and answer scientific questions about the world around them.	Ask questions about the world around them and explain that they can be answered in different ways.	Ask relevant scientific questions, independently, about the world around them and begin to identify how they can answer them.	Ask a wide range of relevant scientific questions that broaden their understanding of the world around them and identify how they can answer them.	Ask and answer deeper and broader scientific questions about the local and wider world that build on and extend their own and others' experiences and knowledge.
Observation	With support, observe, record and talk about materials and living things.	Observe objects, materials, living things and changes over time, sorting and grouping them based on their features.	Observe objects, materials, living things and changes over time, sorting and grouping them based on their features and explaining their reasoning.	Make increasingly careful observations, identifying similarities, differences and changes and making simple connections.	Begin to choose which observations to make and for how long and make systematic, careful observations and comparisons, identifying changes and connections.	Within a group, decide which observations to make, when and for how long, and make systematic and careful observations, using them to make comparisons, identify changes, classify and make links between cause and effect.	Independently decide which observations to make, when and for how long and make systematic and careful observations, using them to make comparisons, identify changes, classify and make links between cause and effect.
Investigation	Observe how activities are going and adapt their ideas if necessary.	With support, follow instructions to perform simple tests and begin to talk about what they might do or what might happen.	Follow a set of instructions to perform a range of simple tests, making simple predictions for what might happen and suggesting ways to answer their questions.	Set up and carry out some simple, comparative and fair tests, making predictions for what might happen.	Begin to independently plan, set up and carry out a range of comparative and fair tests, making predictions and following a method accurately.	Plan and carry out a range of enquiries, including writing methods, identifying variables and making predictions based on prior knowledge and understanding.	Plan and carry out a range of enquiries, including writing methods, identifying and controlling variables, deciding on equipment and data to collect and making predictions based on prior knowledge and understanding.
Gather and Record Data	Record data in simple tables.	With support, gather and record simple data in a range of ways (data tables, diagrams, Venn diagrams).	Use a range of methods (tables, charts, diagrams and Venn diagrams) to gather and record simple data with some accuracy.	Gather and record findings in a variety of ways (diagrams, tables, charts and graphs) with increasing accuracy.	Gather, record, classify and present observations and measurements in a variety of ways (pictorial representations, timelines, diagrams, keys, tables, charts and graphs).	Gather and record data and results of increasing complexity, selecting from a range of methods (scientific diagrams, labels, classification keys, tables, graphs and models).	Choose an appropriate approach to recording accurate results, including scientific diagrams, labels, timelines, classification keys, tables, models and graphs (bar, line and scatter), linking to mathematical knowledge.

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Measurement	With support, use simple equipment such as timers, rulers and containers, to measure length, height, capacity and time.	With support, use simple equipment to measure and make observations.	Use simple equipment to measure and make observations.	Take measurements in standard units, using a range of simple equipment.	Take accurate measurements in standard units, using a range of equipment.	Take increasingly accurate measurements in standard units, using a range of chosen equipment.	Take accurate, precise and repeated measurements in standard units, using a range of chosen equipment.
Report and Conclude	Offer explanations for why things happen, making use of vocabulary such as because, then and next.	Talk about what they have done and say, with help, what they think they have found out.	Begin to notice patterns and relationships in their data and explain what they have done and found out using simple scientific language.	Use suitable vocabulary to talk or write about what they have done, what the purpose was and, with help, draw a simple conclusion based on evidence collected, beginning to identify next steps or improvements.	Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions.	Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions.	Report on and validate their findings, answer questions and justify their methods, opinions and conclusions, and use their results to suggest improvements to their methodology, separate facts from opinions, pose further questions and make predictions for what they might observe.

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Plants

	EYFS	Year 1 Plant Parts	Year 2 Plant Survival	Year 3 Plant Nutrition and Reproduction	Year 4	Year 5	Year 6
N.C	Explore the natural world around them making observations and drawing pictures of animals and plants.	<i>-identify and name a variety of common wild and garden plants, including deciduous and evergreen trees -identify and describe the basic structure of a variety of common flowering plants, including trees.</i>	<i>-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.</i>	<i>-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.</i>			

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<p align="center">Plants</p>	<p>Name basic parts of a plant including flower, seed, root and stem.</p> <p>Understand and demonstrate how to care for living things and compare the needs of a plant to their own.</p>	<p>Identify, compare, group and sort a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Describe how plants change over time.</p> <p>Name the basic plant parts, including the root, stem, leaf, flower, petal, fruit, seed and bulb and label these.</p> <p>Name the basic parts of a tree, including the trunk.</p>	<p>Observe and describe how seeds and bulbs change over time as they grow into mature plants (life cycle).</p> <p>Describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p>Name and describe the functions of the different parts of flowering plants (roots, stem, leaves and flowers).</p> <p>Describe the requirements of plants for life and growth (air, light, water, nutrients and room to grow) and how they vary from plant to plant.</p> <p>Investigate how water is transported within plants.</p> <p>Draw and label the life cycle of a flowering plant, including pollination, seed formation and seed dispersal.</p>			

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Animals Including Humans

	EYFS	Year 1 Animal Parts Human Senses	Year 2 Human Survival Animal Survival	Year 3 Animal Nutrition and the Skeletal System	Year 4 Food and the Digestive System	Year 5 Human Reproduction and Ageing	Year 6 Circulatory System
N.C	Explore the natural world around them making observations and drawing pictures of animals and plants.	<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 	<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. 	<ul style="list-style-type: none"> -identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat -identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	<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 variety of food chains, identifying producers, predators and prey. 	<ul style="list-style-type: none"> -describe the changes as humans develop to old age. 	<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.

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Animals, Including Humans	<p>Name different species/creatures that live under the sea.</p> <p>Know the different ways that they can move their body.</p> <p>Describe what they see, hear and feel when they are outside.</p> <p>Describe the life cycle of a butterfly.</p>	<p>Know the main parts of the human body and draw and label these.</p> <p>Know which body part is associated with which sense.</p> <p>Identify a variety of common animals, including fish, amphibians, reptiles, birds, invertebrates and mammals and sort them into these groups.</p> <p>Identify, label and describe the basic structures of a variety of common animals, including fish, amphibians, reptiles, birds and mammals.</p> <p>Identify and name animals which are carnivores, herbivores and omnivores and sort these animals based on the food they eat.</p>	<p>Describe what humans need to survive.</p> <p>Explain how animals, including humans, need water, food, air and shelter to survive.</p> <p>Know animals have offspring that group into adults and describe the basic life cycle of some familiar animals (butterfly, chicken, frog).</p> <p>Describe the stages of human development (baby, toddler, child, teenager, adult and elderly).</p> <p>Describe the importance of a healthy lifestyle, including exercise, a balanced diet, good quality sleep and personal hygiene.</p>	<p>Identify and group animals that have no skeleton, an internal skeleton (endoskeleton) and an external skeleton (exoskeleton).</p> <p>Compare and contrast the diets of different animals.</p> <p>Describe how humans need the skeleton and muscles for support, protection and movement.</p> <p>Know humans have to get nutrition from what they eat as they cannot make their own food.</p> <p>Explain the importance and characteristics of a healthy, balanced diet.</p>	<p>Describe the purpose of the digestive system and its main parts and each of their functions.</p> <p>Identify the four different types of teeth in humans and other animals and describe their functions.</p> <p>Construct and interpret a variety of food chains and webs to show how energy is passed on over time.</p> <p>Identify producers, consumers prey and predators, including the apex predator.</p>	<p>Describe the changes as humans develop from birth to old age, including baby, infant, toddler, child, adolescent, young adult, adult and senior citizen.</p> <p><i>(Puberty (Year 5) and sexual reproduction (Year 6) is covered in PSHE during the Summer term)</i></p>	<p>Explain how the circulatory system in animals transports oxygen, water and nutrients around the body.</p> <p>Describe the purpose of the circulatory system and identify and name the heart, blood vessels and blood and describe their functions.</p> <p>Explain the impact of positive and negative lifestyle choices on the body, including diet, exercise and drugs.</p>

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Everyday Materials

	EYFS	Year 1 Everyday Materials	Year 2 Use of Materials	Year 3 Rocks	Year 4 States of Matter	Year 5 Properties and Changes of Materials	Year 6
N.C	Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	<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. 	<ul style="list-style-type: none"> -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 	<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 	<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 	<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, liquids and 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 that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda 	

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Everyday Materials	<p>Name a range of different materials.</p> <p>Begin to observe, explore and describe changing states of matter.</p>	<p>Identify and name what an object is made from, including wood, plastic, glass, metal, water and rock.</p> <p>Identify, investigate and describe the simple properties of some everyday materials, such as hard or soft; stretchy or stiff; rough or smooth; opaque or transparent; bendy or rigid and waterproof or not waterproof.</p> <p>Compare and group materials in a variety of ways, such as based on their physical properties.</p>	<p>Identify and compare the suitability of a range of everyday materials for particular uses, including wood, metal, plastic, glass, brick, rock, paper and cardboard.</p> <p>Find out and describe how some objects and materials can be changed by squashing, bending, twisting, stretching, heating, cooling, mixing and being left to decay, and how these changes can be desirable or undesirable.</p>	<p>Compare and group rocks based on their appearance, properties or uses.</p> <p>Describe simply how fossils are formed when things that have lived are trapped within rock, using words, pictures, or a model.</p> <p>Recognise that soils are made from rocks and organic matter.</p> <p>Investigate soils from the local environment, making comparisons and identifying features.</p>	<p>Group and sort materials into solids, liquids or gases.</p> <p>Explain how the arrangement of particles in different states affects the properties of the materials.</p> <p>Observe and explain that some materials change state when they are heated or cooled and measure or research the temperature in degrees Celsius (°C) at which materials change state.</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p>Compare and group everyday materials by their properties, include hardness, solubility, transparency, conductivity (electrical and thermal) and magnetism.</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>Explain that some substances (solutes) will dissolve in liquid (solvents) to form a solution and the solute can be recovered by evaporating off the solvent.</p> <p>Separate mixtures by filtering, sieving and evaporating using knowledge of solids, liquids and gases to support the decision.</p> <p>Identify, demonstrate and compare reversible and irreversible changes.</p>	

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Seasonal Changes

	EYFS	Year 1 Seasonal Changes	Year 2	Year 3	Year 4	Year 5	Year 6
N.C	Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	-observe changes across the four seasons -observe and describe weather associated with the seasons and how day length varies.					
Seasonal Changes	Recall and describe the effect of changing seasons on the natural world around them.	Investigate weather using toys, models or simple equipment. Name and observe different types of weather. Observe and describe how day length changes across the year. Observe and explain changes across the four seasons. Observe the local environment and ask and answer questions about living things and seasonal change.					

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Living Things and Their Habitats

	EYFS	Year 1	Year 2 Habitats Animal Survival	Year 3	Year 4 Grouping and Classifying	Year 5 Human Reproduction and Ageing	Year 6 Evolution and Inheritance
N.C	<p>Explore the natural world around them making observations and drawing pictures of animals and plants.</p> <p>Know some similarities and differences between the natural world around them and contrasting environments.</p>		<p><i>-explore and compare the differences between things that are living, dead, and things that have never been alive</i></p> <p><i>-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</i></p> <p><i>- identify and name a variety of plants and animals in their habitats, including microhabitats</i></p> <p><i>-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.</i></p>		<p><i>-recognise that living things can be grouped in a variety of ways</i></p> <p><i>-explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</i></p> <p><i>-recognise that environments can change and that this can sometimes pose dangers to living things.</i></p>	<p><i>-describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</i></p> <p><i>-describe the life process of reproduction in some plants and animals.</i></p>	<p><i>-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</i></p> <p><i>-give reasons for classifying plants and animals based on specific characteristics.</i></p>

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<p align="center">Living Things and Their Habitats</p>	<p>Recognise some environments that are different to the one in which they live.</p>		<p>Compare and group things that are living, dead or have never been alive.</p> <p>Describe a range of local habitats and habitats beyond their locality (beaches, rainforests, deserts, oceans and mountains) and what all habitats provide for the things that live there.</p> <p>Identify and name a variety of plants and animals in a range of habitats and microhabitats.</p> <p>Describe how animals obtain their food from plants and other animals.</p> <p>Interpret and construct simple food chains to describe how living things depend on each other as a source of food.</p>		<p>Compare, sort and group living things from a range of environments, 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 due to natural or human influences and that this can sometimes pose dangers to living things. (Autumn – Digestive System)</p>	<p>Compare the life cycles of animals, including a mammal, an amphibian, an insect and a bird.</p> <p>Group and sort plants by how they reproduce. (Sow, Grow and Farm – Spring)</p> <p>Describe the life process of reproduction in some plants and animals. (Sow, Grow and Farm – Spring)</p>	<p>Classify living things, including microorganisms, animals and plants, into groups according to common observable characteristics and based on similarities and differences.</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>

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Light

	EYFS	Year 1	Year 2	Year 3 Light and Shadows	Year 4	Year 5	Year 6 Light Theory
N.C				<ul style="list-style-type: none"> -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 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. 			<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 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.

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Light	Observe and interact with natural processes such as light travelling through a transparent material and an object casting a shadow.			<p>Explain why light from the Sun can be dangerous and know there are ways to protect themselves from the Sun.</p> <p>Describe the differences between dark and light and how we need light to be able to see.</p> <p>Group and sort materials as being reflective or non-reflective, noticing light is reflected off surfaces.</p> <p>Recognise and explain, using words or diagrams, how shadows are formed when a light source is blocked by an opaque object.</p> <p>Find patterns in the way shadows change in size during the day.</p>			<p>Identify that light travels in straight lines.</p> <p>Explain that, due to how light travels, we can see things 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>Explain, using words, diagrams or a model, why shadows have the same shape as the objects that cast them and how shadows can be changed.</p>
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Forces

	EYFS	Year 1	Year 2	Year 3 Forces and Magnets	Year 4	Year 5 Forces and Mechanisms	Year 6
N.C				<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 -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"> -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. 	

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Forces	Observe and interact with natural processes such as a magnet attracting an object.			<p>Compare how objects move over surfaces made from different materials.</p> <p>Notice and explain that an object will not move unless a push or pull force is applied, describing forces in action and whether the force requires contact or whether the force can act at a distance (magnetic force).</p> <p>Investigate and compare a range of magnets (bar, horseshow and floating) and explain that magnets have two poles (north and south) and that opposite poles attract each other, while like poles repel each other.</p> <p>Compare and group materials based on their magnetic properties.</p> <p>Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>		<p>Explain that objects fall to Earth due to the force of gravity.</p> <p>Compare and describe the effects of water resistance, air resistance and friction.</p> <p>Recognise and describe how simple levers, gears and pulleys assist the movement of objects by allowing a smaller force to have a greater effect.</p>	
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Sound

	EYFS	Year 1	Year 2	Year 3	Year 4 Sound	Year 5	Year 6
N.C					<i>-identify how sounds are made, associating some of them with something vibrating recognise that vibrations from sounds travel through a medium to the ear -find patterns between 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.</i>		

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<p style="text-align: center;">Sound</p>	<p>Observe and interact with natural processes such as a sound causing a vibration.</p>				<p>Identify and explain how sounds are made and heard using diagrams, models, written methods or verbally, linking this to vibrations.</p> <p>Recognise and investigate that vibrations from sounds travel through a medium to the ear.</p> <p>Compare how the volume of a sound changes at different distances from the source.</p> <p>Compare and find patterns in the volume of sound, linking this to the strength of the vibrations.</p> <p>Compare and find patterns in the pitch of a sound, linking this to the features of the object creating the sound.</p> <p>Understand how the shape of an ear affects how we hear sounds.</p>		
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Electricity

	EYFS	Year 1	Year 2	Year 3	Year 4 Electrical Circuits and Conductors	Year 5	Year 6 Electrical Circuits and Components
N.C					<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 -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. 		<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 on/off position of switches -use recognised symbols when representing a simple circuit in a diagram.

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Electricity					<p>Compare common household equipment and appliances that are and are not powered by electricity.</p> <p>Construct operational simple series circuits using a range of components and switches for control, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>Predict and describe whether a circuit will work based on whether or not the circuit is a complete loop and has a battery or cell.</p> <p>Describe materials as electrical conductors or insulators, associating metals with being good conductors.</p> <p>Recognise that a switch makes or breaks a circuit. When a switch is closed or 'on', the circuit is complete. When a switch is open or 'off', the circuit is incomplete.</p>		<p>Create circuits using a range of components and record as a diagram using the recognised symbols for electrical components.</p> <p>Compare and give reasons for variations in how components in electrical circuits function (brightness of lamps; volume of buzzers and function of on or off switches).</p> <p>Associate the brightness of a lamp or volume of a buzzer with the number and voltage of cells used in a circuit.</p>
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Earth and Space

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5 Earth and Space	Year 6
N.C						<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>	

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Earth and Space						<p>Describe or model the movement of the planets in our Solar System, including Earth, relative to the Sun.</p> <p>Describe or model the movement of the Moon relative to the Earth.</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies and use this knowledge to understand the phases of the Moon and eclipses.</p> <p>Use the idea of Earth's rotation to explain day and night and the Sun's apparent movements across the sky.</p>	
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Evolution and Inheritance

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6 Evolution and Inheritance
N.C							<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>

Martlesham Primary Academy
Science Curriculum



Evolution and Inheritance							<p>Explain that living things have changed over time, using specific examples and evidence.</p> <p>Describe some significant changes that have happened on Earth and the evidence, such as fossils, that support this.</p> <p>Identify that living things produce offspring of the same kind, although the offspring are not identical to either parent.</p> <p>Identify how animals and plants are adapted to suit their environment, such as giraffes having long necks for feeding, and that adaptations may lead to evolution.</p>
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