



# Science Curriculum 2019-20

Working Scientifically					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>I can ask simple questions and understand they may have a number of different answers</p> <p>I can use simple equipment to help me observe the world closely (e.g. hard lenses)</p> <p>I can identify, group and sort objects or living things</p>	<p>I can perform simple comparative tests</p> <p>I can use my observations and ideas to suggest answers to questions</p> <p>I can gather and record data to help answer questions</p> <p>I can notice similarities, differences and patterns</p> <p>I can use appropriate scientific language to communicate my ideas, what I have done and what I found out.</p>	<p>I can gather, record, classify and present data in a variety of ways to help answer questions</p> <p>I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</p> <p>I can identify differences, similarities or changes to simple scientific ideas and processes</p> <p>I can talk about criteria for grouping, sorting and classifying, and use a simple key</p>	<p>I can use simple scientific evidence to answer questions or to support my findings.</p> <p>I can use results to make simple conclusions, make predictions and suggest improvements</p> <p>I can report on findings from enquiries, including oral and written explanations, displays or presentations</p> <p>I can set up simple practical enquiries, comparative and fair tests</p>	<p>I can make predictions using my test results to set-up comparative and fair tests</p> <p>I can use scientific diagrams, labels, classification keys, tables, scatter graphs, bar and line graphs to record my data and results</p> <p>I can use a range of scientific equipment to take measures and repeated readings</p> <p>I can plan different types of scientific enquiries to answer questions including recognising and controlling variables</p> <p>I can recognise which equipment to use for which investigation</p>	<p>I can recognise scientific evidence that can be used to support or refute ideas and arguments</p> <p>I can report and present my findings in oral and written forms such as displays and other presentations (e.g. explaining and concluding my findings, and explaining the degree of trust in my results)</p> <p>I can ask questions about the scientific topics I study, and select and plan the most appropriate way to answer these questions</p> <p>I can use appropriate scientific language to explain, evaluate and communicate my methods and findings</p>
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term 1					
<p><b>Animals (including humans)</b></p> <p>I can name certain fish, amphibians, reptiles, birds and mammals</p> <p>I can describe the similarities and differences between fish, amphibians, reptiles, birds and mammals</p> <p>I can recognise, and describe, animals in my local environment</p> <p>I can describe the terms herbivore, omnivore and carnivore</p>	<p><b>Animals (including humans)</b></p> <p>I can identify that animals have offspring which grow into adults</p> <p>I can identify what the basic needs are for animals, including humans, for survival</p> <p>I can describe the basic needs of animal, including humans, for survival</p> <p>I can describe the importance of exercise for humans</p> <p>I can describe what should be included in a human's balanced diet</p>	<p><b>Materials &amp; Rocks</b></p> <p>I can compare and describe solids, gases and liquids</p> <p>I can group materials by whether they are a solid, liquid or gas</p> <p>I can observe how materials change state when heated or cooled</p> <p>I can use the terms evaporation and condensation when describing the water cycle</p> <p>I can compare different kinds of rocks based on their appearance</p>	<p><b>Animals (including humans)</b></p> <p>I can identify and describe the basic parts of the human digestive system</p> <p>I can identify and describe the different types of teeth in humans and how they function</p> <p>I can compare the teeth of herbivores and omnivores</p> <p>I can describe how to look after my teeth</p> <p>I can identify and describe a producer in a food chain</p>	<p><b>Forces</b></p> <p>I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</p> <p>I can identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p> <p>I can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect</p>	<p><b>Animals (including humans)</b></p> <p>I can identify and name the main parts of the human circulatory system</p> <p>I can describe the functions of the heart, blood vessels and blood</p> <p>I can describe how water and nutrients are transported around the body</p> <p>I can describe how blood is pumped around the body</p> <p>I can recognise the impact of an unhealthy diet</p>



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<p>I can recognise herbivores, carnivores and omnivores from the animals that I know</p> <p>I can identify and name the basic parts of the human body I know which parts of the human body are associated with each sense</p> <p>I can describe parts of the human body</p>	<p>I can recognise why hygiene is important and what I must do to be hygienic</p>	<p>I can compare different kinds of rocks based on their simple physical properties</p> <p>I can describe how fossils are formed</p> <p>I can describe the fossils I have observed</p> <p>I can describe how soils forms I can research the different kinds of living things whose fossils are found in sedimentary rock</p> <p>I can observe how rocks change over time</p>	<p>I can identify and describe a predator in a food chain</p> <p>I can identify and describe prey in a food chain</p> <p>I can interpret a food chain I can create my own food chain</p>		<p>I can describe how to keep my body healthy</p>
<p><b>Living Things &amp; Habitats</b></p> <p>I can compare the differences between things that are living, dead and things that have never been alive</p> <p>I can identify that most living things live in habitats to which they are suited</p> <p>I can describe how certain animals are suited to their habitats</p> <p>I can describe how animals and plants depend on each other in their habitat</p> <p>I can accurately describe a habitat and micro-habitat using evidence from my research</p> <p>I can create a simple food chain for habitats in my local environment</p>	<p><b>Forces &amp; Magnets</b></p> <p>I can compare how things move on different surfaces</p> <p>I notice that some forces need contact between two objects, but magnetic forces can act at a distance</p> <p>I can observe how magnets attract or repel each other and attract some materials and not others</p> <p>I can 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>I can describe magnets as having two poles</p> <p>I can predict whether two magnets will attract or repel each other, depending on which poles are facing</p>	<p><b>States of Matter</b></p> <p>I can compare and describe solids, gases and liquids</p> <p>I can group materials by whether they are a solid, liquid or gas</p> <p>I can observe how materials change state when heated or cooled</p> <p>I can use the terms evaporation and condensation when describing the water cycle</p>	<p><b>Living Things &amp; Habitats</b></p> <p>I can describe the similarities and differences between the life cycles of different plants</p> <p>I can describe the similarities and differences between the life cycles of different animals</p> <p>I can identify the processes of reproduction in animals</p> <p>I can identify the processes of reproduction in plants</p> <p>I can describe reproduction in plants</p> <p>I can compare the life cycles of plants in my local environment to different habitats around the world (such as in the rainforest or in the Arctic)</p>		<p><b>Living Things &amp; Habitats</b></p> <p>I can explain why living things can be classified into different groups</p> <p>I can explain why living things can be in one group and not another</p> <p>I can describe the main features of particular groups such as vertebrates and invertebrates</p> <p>I can use my research of animals unknown to me in order to classify them</p>



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## Term 2

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<p><b>Seasonal Change</b></p> <p>I can describe the four seasons</p> <p>I can talk about the changes to plants across the seasons</p> <p>I can talk about the changes to the weather across the seasons</p>	<p><b>Plants</b></p> <p>I can describe how seeds and bulbs grow into plants</p> <p>I can identify what plants need to grow</p> <p>I can identify what a seed needs to germinate</p> <p>I can identify what plants need to stay healthy</p> <p>I can observe how plants grow under different conditions such as without light</p>	<p><b>Plants</b></p> <p>I can identify the different parts of a flowering plant</p> <p>I can describe the functions and different parts of a flowering plant</p> <p>I can describe how the structure of the plant links to its function</p> <p>I can identify the requirements of a plant for life and growth</p> <p>I can describe how water is transported through a plant</p> <p>I can describe how seeds are formed</p> <p>I can describe how seeds are dispersed</p> <p>I can describe the process of pollination</p>	<p><b>Electricity</b></p> <p>I can identify common appliances that run on electricity</p> <p>I can identify the basic parts of a simple series electrical circuit e.g. cells, wires, bulbs, switches and buzzers</p> <p>I can create a simple series electrical circuit using basic parts</p> <p>I can describe what will happen if the circuit isn't complete</p> <p>I can describe the impact of an open and / or closed switch on a simple series circuit</p> <p>I can recognise and describe some common conductors</p> <p>I can recognise and describe some common insulators</p> <p>I can identify metals that are good conductors</p> <p>I can describe how to work safely with electricity</p>	<p><b>Properties of Materials</b></p> <p>I can compare and group everyday materials on the basis of their properties e.g. hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets</p> <p>I can recognise that some materials will dissolve in liquid to form a solution</p> <p>I can describe how to recover a substance from a solution</p> <p>I can use my knowledge of solids, liquids and gases to decide how mixtures might be separated</p> <p>I can use evidence from my tests to decide how to use everyday materials effectively</p> <p>I can demonstrate that dissolving, mixing and changing are reversible processes</p> <p>I can explain that certain changes are irreversible and new materials can be formed e.g. burning</p>	<p><b>Electricity</b></p> <p>I can construct simple series circuit diagram using recognised symbols</p> <p>I can investigate the impact the number and voltage of cells has on the brightness of a lamp</p> <p>I can investigate the impact the number and voltage of cells has on the volume of a buzzer</p> <p>I can investigate and describe the variations in how components function e.g. the brightness of bulbs, loudness of buzzers and on/off position of switches</p>
<p><b>Plants</b></p> <p>I can identify and name a variety of common wild and garden plants</p> <p>I can name the different parts of a flower e.g. root, stem, leaf</p> <p>I can compare flowers and plants to identify similarities and differences</p>	<p><b>Plants</b></p>	<p><b>Animals (including humans)</b></p> <p>I can identify that animals, including humans, get their nutrition from what they eat</p> <p>I can describe why animals need the right type and amount of nutrition</p> <p>I can research and design my own balanced diet using different food groups</p>	<p><b>Living Things &amp; Habitats</b></p> <p>I can group animals into vertebrates and invertebrates</p> <p>I can group plants into categories such as flowering plants and non-flowering plants</p> <p>I can use keys to identify living things in my local environment</p>	<p><b>Animals (including humans)</b></p> <p>I can describe how humans grow and develop as they age</p> <p>I can identify the changes to male and female bodies as they reach puberty</p> <p>I can research and use evidence to describe the different gestation periods of various animals</p>	<p><b>Light</b></p> <p>I can use examples to show that light appears to travel in straight lines</p> <p>I can demonstrate that light travels in straight lines to explain how objects are seen</p> <p>I can discuss how objects are seen using scientific vocabulary e.g. light source and reflection</p>



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<p>I can describe how flowers grow</p>		<p>I can describe the function of a skeleton in humans</p> <p>I can describe the function of muscles in humans</p> <p>I can identify animals with and without skeletons</p> <p>I can describe what would happen if a human did not have a skeleton</p>	<p>I can recognise that environments change over time</p> <p>I understand the impact humans have on my local environment</p> <p>I can research and describe the positive human effects on an environment such as creating nature reserves</p> <p>I can research and describe the negative human effects on an environment such as dropping litter</p>	<p>I can find out and record how the length and mass of a baby changes over time</p>	<p>I can use my knowledge of the way light travels to describe how shadows are formed</p>
Term 3					
Everyday Materials	Everyday Materials	Light	Sound	Earth & Space	Inheritance
<p>I can identify and name everyday materials</p> <p>I can recognise objects and the materials they are made from</p> <p>I can describe the properties of everyday materials</p> <p>I can describe the similarities and differences between everyday materials</p> <p>I can group materials by their properties</p> <p>I can describe why certain materials are used for certain purposes e.g. bricks and houses</p>	<p>I can identify the suitability of everyday materials for particular uses</p> <p>I can recognise that certain materials can be used for more than one purpose e.g. wood can be used for matches and floors</p> <p>I can recognise that certain objects can be made using different materials</p> <p>I can squash, bend, twist and stretch certain objects and describe how the material makes the shape change</p>	<p>I can recognise that we need light in order to see things</p> <p>I can describe what happens when there is an absence of light</p> <p>I can describe what happens when light hits a mirror</p> <p>I can describe how light from the sun can be dangerous and the ways that I can protect my eyes</p> <p>I can recognise how shadows are formed when a solid object blocks the light</p> <p>I can investigate how the size of shadows change</p> <p>I can find patterns in the way that the size of shadows change</p>	<p>I can identify how sounds are made</p> <p>I can describe how sounds travel to my ear e.g. vibrations through the air</p> <p>I can recognise patterns between the pitch of a sound and the features of an object that produced the sound</p> <p>I can recognise patterns between the volume of a sound and the strength of the vibrations that produced it</p> <p>I can describe what happens when you move away from the source of a sound</p>	<p>I can name all of the planets</p> <p>I can describe the Sun, Earth and Moon as approximately spherical bodies</p> <p>I can describe the movement of the Earth, and other planets, relative to the Sun in the solar system</p> <p>I can describe the movement of the Moon relative to the Earth</p> <p>I can identify and describe that a moon orbits a planet</p> <p>I can explain day and night, using the Earth's rotation and the movement of the Sun across the sky</p>	<p>I can recognise that living things have changed over time</p> <p>I can describe how fossils provide information about living things that inhabited the Earth millions of years ago</p> <p>I can use evidence from my observations to describe how offspring vary and are not identical to their parents</p> <p>I can describe how variations occur between individuals of the same species</p> <p>I can research and identify how animals and plants are adapted to suit their environment in different ways</p> <p>I can describe how adaptation can lead to evolution</p>