

Year 1	Science Achievement Statements					
Working Scientifically	Over the year...			Accur/ with support	Quick/ on own	Apply/ explain
	Working Scientifically KS1 Y1 Learners can:					
	1C3	ask simple questions and recognise that they can be answered in different ways				
	1F11	observe closely, using simple equipment				
	1F12	perform simple tests				
	1F13	identify and classify				
	1C4	use my observations and ideas to suggest answers to questions				
1C5	gather and record data to help me answer questions					
What's the weather like today? Seasonal change (ongoing LU)	Seasonal Change - Learners can:					
1F3	observe changes across the four seasons					
1F4	observe and describe weather associated with the seasons and how day length varies.					
	By the end of the Learning Unit...			Accur/ with support	Quick/ on own	Apply/ explain
Why do we play with different toys as we grow older? (History & Science)	Animals including humans – Learners can:					
1F10	identify, name, draw and label the basic parts of the human body and link parts to my senses					

<p>Hello, I'm new here. Bonjour. Je suis nouveau ici. (Around and About our school) (Geography and Science)</p>	<p>Plants – Learners can:</p>				
	<p>1F1</p>	<p>identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen</p>			
	<p>1F2</p>	<p>identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.</p>			
<p>What can we learn about our world from stories? (Science and Design & Technology)</p>	<p>Everyday Materials – Learners can:</p>				
	<p>1F5</p>	<p>identify and name a variety of everyday materials including; wood, plastic, glass, water and rock</p>			
	<p>1C1</p>	<p>compare and group together a variety of everyday materials on the basis of their simple physical properties</p>			
	<p>1F6</p>	<p>distinguish between an object and the material which it is made</p>			
	<p>1F7</p>	<p>describe some of the physical properties of everyday materials</p>			
	<p>Seasonal Change – Learners can:</p>				
	<p>1F3</p>	<p>observe changes across the four seasons</p>			
<p>1F4</p>	<p>observe and describe weather associated with the seasons and how day length varies.</p>				
<p>Starry Night (Arts)</p>	<p>Seasonal Change – Learners can:</p>				
	<p>1F3</p>	<p>observe changes across the four seasons</p>			
	<p>1F4</p>	<p>observe and describe weather associated with the seasons and how day length varies.</p>			
<p>Also an ongoing opportunity in What's the weather like today?</p>					

Why is water precious? (Science)	Plants – Learners can:				
	1F1	identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen			
	1F2	identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.			
	Plants – Learners can:				
	2F1	observe and describe how seeds and bulbs grow into mature plants			
	2F2	find out and describe how plants need water, light and a suitable temperature to grow and stay healthy			
	Animals including humans – Learners can:				
	1F8	name and identify common animals including fish, amphibians, reptiles, birds and mammals			
	1C2	compare the structure of a variety of common animals including fish, amphibians, reptiles, birds, mammals and pets			
	1F9	name and identify carnivores, herbivores and omnivores			
1F10	identify, name, draw and label the basic parts of the human body and link parts to my senses				
Where could we go for a great day out? (History)	Animals including humans – Learners can:				
	1F8	name and identify common animals including fish, amphibians, reptiles, birds and mammals			
	1C2	compare the structure of a variety of common animals including fish, amphibians, reptiles, birds, mammals and pets			
	1F9	name and identify carnivores, herbivores and omnivores			
	2F6	notice that animals, including humans have offspring which grow into adults			
	2F7	find out and describe the basic needs of animals including humans for survival			

Year 2	Science Achievement Statements				
Working Scientifically	Over the year...	Accur/ with support	Quick/ on own	Apply/ explain	
	Working Scientifically KS1 (adjusted to include reference to TAF end KS1 Science 2018-19 onwards) <i>Teachers need to have evidence which demonstrates that the pupil meets all of the 'working scientifically' statements and all of the 'science content' taught in the final year of the key stage.</i> Using appropriate scientific language from the national curriculum, Learners can:				
	2C7	<i>ask my own questions about what I notice</i>			
	2C8	<i>use different types of scientific enquiry to gather and record data, using simple equipment where appropriate, to answer questions:</i>			
	2C9	<ul style="list-style-type: none"> • <i>observing changes over time</i> 			
	2C10	<ul style="list-style-type: none"> • <i>noticing patterns</i> 			
	2C11	<ul style="list-style-type: none"> • <i>grouping and classifying things</i> 			
	2C12	<ul style="list-style-type: none"> • <i>carrying out simple comparative tests</i> 			
	2C13	<ul style="list-style-type: none"> • <i>finding things out using secondary sources of information</i> 			
2C14	<i>communicate my ideas, what I do and what I find out in a variety of ways</i>				

	By the end of the Learning Unit...	Accur/ with support	Quick/ on own	Apply/ explain
Can party food be healthy? (Science and Design & Technology)	Everyday Materials – Learners can:			
	1F5 identify and name a variety of everyday materials including; wood, plastic, glass, water and rock			
	1C1 compare and group together a variety of everyday materials on the basis of their simple physical properties			
	1F6 distinguish between an object and the material which it is made			
	1F7 describe some of the physical properties of everyday materials			
	Uses of everyday materials – Learners can :			
	2F3 find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.			
	2C1 identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses			
Pride in Place (History)	Animals including humans – Learners can:			
	2C6 describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene			
	Plants – Learners can:			
	1F1 identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen			
	1F2 identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.			

What is the best way for Mrs Armitage to travel? (Science and Design & Technology)	Everyday Materials - Learners can:				
	1F5	identify and name a variety of everyday materials including; wood, plastic, glass, water and rock			
	1C1	compare and group together a variety of everyday materials on the basis of their simple physical properties			
	1F6	distinguish between an object and the material which it is made			
	1F7	describe some of the physical properties of everyday materials			
	Uses of everyday materials - Learners can:				
	2F3	find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.			
2C1	identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses				
Where do Bong trees grow? (Arts)	An opportunity to touch upon...				
	Animals including humans - Learners can:				
	2F6	notice that animals, including humans have offspring which grow into adults			
	2F7	find out and describe the basic needs of animals including humans for survival			

What makes us like other animals? (Science)	Living things and their habitats - Learners can:				
	2C2	explore and compare the differences between things that are living and dead and have never been alive			
	2C3	identify and describe different habitats and how they provide for the basic needs for different animals and plants and how they depend on each other			
	2C4	describe how animals obtain their food from other animals, using the idea of a simple food chain			
	2C5	identify that most living things live in habitats that they are suited			
	2F4	identify and name a variety of plants and animals in their habitats, including micro-habitats			
	2F5	identify and name different sources of food using the idea of a simple food chain			
	Animals including humans - Learners can:				
	2F6	notice that animals, including humans have offspring which grow into adults			
	2F7	find out and describe the basic needs of animals including humans for survival			
	2C6	describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene			
		An opportunity to revisit...			
	Plants - Learners can:				
	2F1	observe and describe how seeds and bulbs grow into mature plants			
2F2	find out and describe how plants need water, light and a suitable temperature to grow and stay healthy				

How did families have fun in the past? (Geography)	Everyday Materials - Learners can:				
	1F5	identify and name a variety of everyday materials including; wood, plastic, glass, water and rock			
	1C1	compare and group together a variety of everyday materials on the basis of their simple physical properties			
	1F6	distinguish between an object and the material which it is made			
	1F7	describe some of the physical properties of everyday materials			
	Uses of everyday materials - Learners can:				
	2F3	find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.			
	2C1	identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses			
	An opportunity to get ahead with ...				
	Rocks - Learners can:				
	3F6	compare and group together different types of rocks based on their appearance and physical simple properties			
3F7	describe in simple terms how fossils are formed when things that have lived are trapped within rock				
3F8	recognise that soil is made from rocks and organic matter				

Science content TAF KS1 - Year 2 Learners can

- name and locate parts of the human body, including those related to the senses [year 1], and describe the importance of exercise, a balanced diet and hygiene for humans [year 2]
- describe the basic needs of animals for survival and the main changes as young animals, including humans, grow into adults [year 2]
- describe the basic needs of plants for survival and the impact of changing these and the main changes as seeds and bulbs grow into mature plants [year 2]
- identify whether things are alive, dead or have never lived [year 2]
- describe and compare the observable features of animals from a range of groups [year 1]
- group animals according to what they eat [year 1], describe how animals get their food from other animals and/or from plants, and use simple food chains to describe these relationships [year 2]
- describe seasonal changes [year 1]
- name different plants and animals and describe how they are suited to different habitats [year 2]
- distinguish objects from materials, describe their properties, identify and group everyday materials [year 1] and compare their suitability for different uses [year 2].

Year 3	Science Achievement Statements					
Working Scientifically	Over the year...			Accur/ with support	Quick/ on own	Apply/ explain
	Working Scientifically LKS2 Learners can:					
	3C8	ask relevant questions and use different types of scientific enquiry to answer them				
	3C9	set up simple practical enquiries, comparative and fair tests				
	3F17	make systematic and careful observations				
	3F18	take accurate measurements, where appropriate, using standard units				
	3F19	use a range of equipment, including thermometers and data loggers				
	3C10	gather, record, classify and present data in a variety of ways to help in answering questions				
	3F20	record my findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables				
	3C11	use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions				
	3F21	report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions				
	3C12	identify differences, similarities or changes related to simple scientific ideas and processes				
	3C13	use straightforward scientific evidence to answer questions or to support their findings.				

	By the end of the Learning Unit...	Accur/ with support	Quick/ on own	Apply/ explain
Bright Sparks - How does electricity work? (Science Focus)	Electricity - Learners can:			
	4F8	identify common electrical appliances		
	4F9	construct a simple electrical circuit, identifying its parts including cells, wires, bulbs, switches and buzzers		
	4F10	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		
	4F11	recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit		
	4F12	recognise some simple conductors and insulators		
	Forces & magnets - Learners can:			
	3F2	notice that some forces need contact between two objects, but magnetic forces can act at a distance		
	3F3	observe how magnets attract or repel each other and attract some materials and not others		
	3C5	compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet		
	3F4	identify some magnetic materials		
Who were the greatest builders in the world? (History Focus)	Forces & magnets - Learners can:			
	3C4	compare how things move on different surfaces		
	Plants - Learners can:			
	3C1	explore the requirements of plants for life and growth and how they vary from plant to plant		
	Rocks - Learners can:			
	3F8	recognise that soil is made from rocks and organic matter		
	States of matter - Learners can:			
	4C5	compare and group materials together, according to whether they are solids, liquids or gases		
4F3	observe that some materials change state when they are heated, cooled and measure or research the temperature at which it happens			

<p>Let's go on adventure. Would we like to visit Guatemala?</p> <p>(Technology and Science Focus)</p>	Forces & magnets - Learners can:				
	3C4	compare how things move on different surfaces			
	3F2	notice that some forces need contact between two objects, but magnetic forces can act at a distance			
	3F3	observe how magnets attract or repel each other and attract some materials and not others			
	3C5	compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet			
	3F4	identify some magnetic materials			
	3F5	describe that magnets have 2 poles			
	3C6	predict if 2 magnets will attract or repel by looking at the poles			
<p>The Games Children Play</p> <p>(Arts Focus)</p>	An opportunity to...				
	Animals including humans - Learners can:				
<p>Are bugs important?</p> <p>(Science Focus)</p>	Plants - Learners can:				
	3F1	identify and describe the functions of different parts of flowering plants			
	3C1	explore the requirements of plants for life and growth and how they vary from plant to plant			
	3C2	investigate the way in which water is transported within plants			
	3C3	explore the parts that flowers play in the life cycle of flowering plants			
	Living things and their habitats - Learners can:				
	4C1	recognise that living things can be grouped in a variety of ways			
	4C2	explore and use classification keys to help, group, identify and name a variety of living things in their local and wider environment			
	4C3	recognise that environments can change and this can sometimes pose dangers to living things			
	Animals including humans - Learners can:				
	4C4	construct and interpret a variety of food chains, identifying producers, predators and prey.			
Opportunities to touch upon...					

<p>How can we make living here better for everyone? Town Planners</p> <p>(Geography Focus)</p>	Rocks - Learners can:			
	3F6	compare and group together different types of rocks based on their appearance and physical simple properties		
	3F7	describe in simple terms how fossils are formed when things that have lived are trapped within rock		
	3F8	recognise that soil is made from rocks and organic matter		
	States of matter - Learners can:			
	4C5	compare and group materials together, according to whether they are solids, liquids or gases		
	4F3	observe that some materials change state when they are heated, cooled and measure or resear the temperature at which it happens		
4F4	identify the part played by evaporation and condensation in the water cycle and associate the ra evaporation with temperature.			

Year 4	Science Achievement Statements					
Working Scientifically	Over the year...			Accur/ with support	Quick/ on own	Apply/ explain
	Working Scientifically LKS2 Learners can:					
	4C8	ask relevant questions and use different types of scientific enquiry to answer them				
	4C9	set up simple practical enquiries, comparative and fair tests				
	4F13	make systematic and careful observations				
	4F14	take accurate measurements, where appropriate, using standard units				
	4F15	use a range of equipment, including thermometers and data loggers				
	4C10	gather, record, classify and present data in a variety of ways to help in answering questions				
	4F16	record my findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables				
	4C11	use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions				
	4F17	report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions				
	4C12	identify differences, similarities or changes related to simple scientific ideas and processes				
4C13	use straightforward scientific evidence to answer questions or to support their findings.					

	By the end of the Learning Unit...	Accur/ with support	Quick/ on own	Apply/ explain
<p>How do I see, how do I hear?</p> <p>(Science Focus)</p>	Light - Learners can:			
	3F9 recognise that we need light to see in order to see things and that darkness is the absence of light			
	3F10 notice that light is reflected from surfaces			
	3F11 recognise that light from the sun can be dangerous and that there are ways to protect their eyes			
	3F12 recognise that shadows are formed when the light from a light source is blocked by a opaque object			
	3C7 find patterns in the way that the size of shadows change			
	Sound - Learners can:			
	4F4 identify how sounds are made, associating some of them with something vibrating			
	4F5 recognise that vibrations from sounds travel through something to the ear			
	4C6 find patterns between the volume of a sound and the strength of the vibrations that produced it			
4C7 find patterns between the pitch of a sound and features of what produced it				
4F6 recognise that sounds get fainter at the distance from the sound source increases				
<p>Why do we speak English at school? Where did English come from?</p> <p>(History Focus)</p>	Forces - Learners can:			
	5F8 identify the effects of air resistance, water resistance and friction			

Should we stop eating chocolate? (Technology and Science Focus)	States of matter - Learners can:				
	4C5	compare and group materials together, according to whether they are solids, liquids or gases			
	4F3	observe that some materials change state when they are heated, cooled and measure or research the temperature at which it happens			
	Animals including humans - Learners can:				
	3F14	identify that animals, including humans, cannot make their own food, they get nutrition from what they eat			
From a Railway Carriage (Arts Focus)	Animals including humans - Learners can:				
	4F2	identify the different types of teeth in humans and their simple functions			

<p>What happens inside us?</p> <p>(Science Focus)</p>	Animals including humans - Learners can:			
	3F13	identify that animals including humans need the right types and amount of nutrition		
	Animals including humans - Learners can:			
	4F1	describe the simple functions of the basic parts of the digestive system in humans		
	4F2	identify the different types of teeth in humans and their simple functions		
	Animals including humans - Learners can:			
	5F3	describe the changes as humans develop to old age		
	Animals including humans - Learners can:			
	6F1	identify the main parts of the human circulatory system and describe their functions		
	6F2	recognise the impact of diet, exercise, drugs and lifestyle on our bodies		
6F3	describe the ways in which nutrients and water are transported within animals, including humans			
<p>European Regional Study</p> <p>(Geography Focus)</p>	States of matter – related to weather - Learners can:			
	4C5	compare and group materials together, according to whether they are solids, liquids or gases		
	4F3	observe that some materials change state when they are heated, cooled and measure or research the temperature at which it happens		
	4F3a	identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.		
	Rocks - depending on the region chosen there may opportunities to revisit - Learners can:			
	3F6	compare and group together different types of rocks based on their appearance and physical simple properties		
	3F7	describe in simple terms how fossils are formed when things that have lived are trapped within rock		
	3F8	recognise that soil is made from rocks and organic matter		

Year 5	Science Achievement Statements						
Working Scientifically	Over the year...			Accur/ with support	Quick/ on own	Apply/ explain	
	Working Scientifically UKS2 Y5 - Learners can:						
	5C8	plan different types of scientific enquiry to answer questions including recognising and controlling variable where necessary					
	5F10	take measurements, using a range of scientific equipment with increasing accuracy and precision, taking repeat readings where appropriate					
	5F11	record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs					
	5C9	use straightforward scientific evidence to answer questions or to support their findings.					
	5C10	identify scientific evidence that has been used to support of refute ideas or arguments					
	5C11	identify differences, similarities or changes related to simple scientific ideas and processes.					
	5C12	use test results to make predictions to set up further comparative and fair tests					
	5C13	report and present findings, including conclusions, casual relationships and explanations of results					
5F12	report and present findings in oral and written forms such as displays and other presentations.						

	By the end of the Learning Unit...	Accur/ with support	Quick/ on own	Apply/ explain
What is it made of? (Science Focus)	Properties and changes of materials - Learners can:			
	5C1	compare and group together everyday materials on the basis on their properties, including their properties, including their hardness solubility, transparency, conductivity and response to magnet		
	5C2	recognise that some materials will dissolve in liquid to form a solution, and describe how to recover a substance form a solution		
	5C3	use knowledge of solids, liquids, and gases to decide how mixtures might be separated through filtering, sieving and evaporating		
	5C4	give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials including metals, wood and plastic		
	5F4	demonstrate that dissolving, mixing and changes of state are reversible changes		
	5C5	explain that some changes result in the formation one materials, and that this kind of change is not usually reversible		
	Opportunities to revisit...			
	Forces & magnets - Learners can:			
	3C4	compare how things move on different surfaces		
	3F2	notice that some forces need contact between two objects, but magnetic forces can act at a distance		
	3F3	observe how magnets attract or repel each other and attract some materials and not others		
	3C5	compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet		
	3F4	identify some magnetic materials		
	3F5	describe that magnets have 2 poles		
	3C6	predict if 2 magnets will attract or repel by looking at the poles		
	States of matter - Learners can:			
	4C5	compare and group materials together, according to whether they are solids, liquids or gases		
	4F3	observe that some materials change state when they are heated, cooled and measure or research the temperature at which it happens		
	4F3a	identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.		

<p>Why would someone build a castle in England? Why don't we build them now? (History Focus)</p>	<p>Forces - Learners can:</p> <p>5F9 recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect</p>			
<p>Fairground (Technology and Science Focus)</p>	<p>Forces - Learners can:</p> <p>5C7 explain that unsupported objects fall towards the Earth because of the force of gravity</p> <p>5F8 identify the effects of air resistance, water resistance and friction</p> <p>5F9 recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect</p> <p>Light - Learners can:</p> <p>6F6 recognise that light appears to travel in straight lines</p> <p>6C4 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>6C5 explain that we see things because of the way light travels</p> <p>6C6 use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</p> <p>Electricity - Learners can:</p> <p>6C7 associate the outcome of a circuit with a number and voltage of the cells used</p> <p>6C8 compare and give reasons for variations in how components function, including the brightness of bulbs, loudness of buzzers and the on/off positions of switches</p> <p>6F7 use recognised symbols when representing a simple circuit in a diagram</p>			
<p>The Highway-man (Arts Focus)</p>				

<p>Do we make the most of what is right on our doorstep?</p> <p>(Science Focus)</p>	<p>Living things and their habitats - Learners can:</p> <p>5F1 describe the differences in life cycles of mammals, amphibians, insects and birds</p> <p>5F2 describe the life process of reproduction in some plants and animals</p> <p>Living things and their habitats - Learners can:</p> <p>6C1 describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals</p> <p>6C2 give reasons for classifying plants and animals based on specific characteristics</p> <p>Opportunities to also revisit aspects of... Plants Y3, Rocks Y3, Living things and their habitats Y4, Animals including humans Y4</p>			
<p>Who are we? Why do I live here?</p> <p>(Geography Focus)</p>	<p>Rocks - Learners can:</p> <p>3F6 compare and group together different types of rocks based on their appearance and physical simple properties</p> <p>3F7 describe in simple terms how fossils are formed when things that have lived are trapped within rock</p> <p>3F8 recognise that soil is made from rocks and organic matter</p>			

Year 6	Science Achievement Statements				
Working Scientifically	Over the year...	Accur/ with support	Quick/ on own	Apply/ explain	
	Working Scientifically UKS2 (adjusted to include reference to TAF end KS2 Science 2018-19 onwards) <i>Teachers need to have evidence which demonstrates that the pupil meets all of the ‘working scientifically’ statements and all of the ‘science content’ taught in the final year of the key stage.</i>				
	Using appropriate scientific language from the national curriculum, Learners can:				
	6C9	<i>describe and evaluate my own and others’ scientific ideas related to topics in the national curriculum (including ideas that have changed over time), using evidence from a range of sources</i>			
	6C10	<i>ask my own questions about the scientific phenomena that I am studying, and select the most appropriate ways to answer these questions, recognising and controlling variables where necessary (i.e. observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests, and finding things out using a wide range of secondary sources)</i>			
	6F8	<i>use a range of scientific equipment to take accurate and precise measurements or readings, with repeat readings where appropriate</i>			
	6F9	<i>record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</i>			
6C11	<i>draw conclusions, explain and evaluate their methods and findings, communicating these in a variety of ways</i>				
6C12	<i>raise further questions that could be investigated, based on their data and observations.</i>				
Let’s Go Round Again (Science)	Opportunity to revisit any area of Science that has not been securely learned over the Key Stage – use particularly in Autumn 2, Spring 2, Summer 1 where Science is not the focus subject				

	By the end of the Learning Unit...	Accur/ with support	Quick/ on own	Apply/ explain
What's out there? (Science Focus)	Light - Learners can:			
	6F6 recognise that light appears to travel in straight lines			
	6C4 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.			
	6C5 explain that we see things because of the way light travels			
	6C6 use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them			
	Earth and space - Learners can:			
	5F5 describe the movement of the Earth and other planets in our solar system relative to the Sun			
	5F6 describe how the moon moves in relation to the earth			
	5F7 describe the Sun, Earth and Moon as approximately spherical			
	5C6 talk about Earth's rotation to explain day and night and the apparent movement of the Sun across the sky			
	Forces - Learners can:			
5C7 explain that unsupported objects fall towards the Earth because of the force of gravity				
	Opportunities to also revisit aspects of... Rocks Y3, States of Matter Y4, Properties and Changes of Materials Y5			
Has there ever been a better time to live here? (History Focus)	Opportunity to look at healthy diet			
	Animals including humans - Learners can:			
	6F2 recognise the impact of diet, exercise, drugs and lifestyle on our bodies			

Why do some creatures no longer exist? (Science Focus)	Evolution and inheritance - Learners can:					
	6F4	recognise that living things have changed over time and that fossils provide information about things that lived on the Earth millions of years ago				
	6F5	recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents				
	C3	identify how animals and plants are adapted to suit their environment in different ways and that adaption may lead to evolution				
	This builds on... Rocks & Soils Y3, Living things and their habitats Y4 & Y5					
The Lady of Shalott (Arts Focus)						
The Great UK Geographical Challenge (Geography)						
How successful are we as entrepreneurs ? (Technology Focus)						

Science content TAF KS2 - Year 6 Learners can:

- name and describe the functions of the main parts of the digestive [year 4], musculoskeletal [year 3] and circulatory systems [year 6]; and describe and compare different reproductive processes and life cycles in animals [year 5]
- describe the effects of diet, exercise, drugs and lifestyle on how the body functions [year 6]
- name, locate and describe the functions of the main parts of plants, including those involved in reproduction [year 5] and transporting water and nutrients [year 3]
use the observable features of plants, animals and micro-organisms to group, classify and identify them into broad groups, using keys or other methods [year 6]
- construct and interpret food chains [year 4]
- describe the requirements of plants for life and growth [year 3]; and explain how environmental changes may have an impact on living things [year 4]
- use the basic ideas of inheritance, variation and adaptation to describe how living things have changed over time and evolved [year 6]; and describe how fossils are formed [year 3] and provide evidence for evolution [year 6]
- group and identify materials [year 5], including rocks [year 3], in different ways according to their properties, based on first-hand observation; and justify the use of different everyday materials for different uses, based on their properties [year 5]
- describe the characteristics of different states of matter and group materials on this basis; and describe how materials change state at different temperatures, using this to explain everyday phenomena, including the water cycle [year 4]
- identify and describe what happens when dissolving occurs in everyday situations; and describe how to separate mixtures and solutions into their components [year 5]
- identify, with reasons, whether changes in materials are reversible or not [year 5]
- use the idea that light from light sources, or reflected light, travels in straight lines and enters our eyes to explain how we see objects [year 6], and the formation [year 3], shape [year 6] and size of shadows [year 3]

- use the idea that sounds are associated with vibrations, and that they require a medium to travel through, to explain how sounds are made and heard [year 4]
- describe the relationship between the pitch of a sound and the features of its source; and between the volume of a sound, the strength of the vibrations and the distance from its source [year 4]
- describe the effects of simple forces that involve contact (air and water resistance, friction) [year 5], that act at a distance (magnetic forces, including those between like and unlike magnetic poles) [year 3], and gravity [year 5]
- identify simple mechanisms, including levers, gears and pulleys, that increase the effect of a force [year 5]
- use simple apparatus to construct and control a series circuit, and describe how the circuit may be affected when changes are made to it; and use recognised symbols to represent simple series circuit diagrams [year 6]
- describe the shapes and relative movements of the Sun, Moon, Earth and other planets in the solar system; and explain the apparent movement of the sun across the sky in terms of the Earth's rotation and that this results in day and night [year 5]

Foundational and Conceptual Learning

	Foundational	Conceptual
Outcomes	Learners have accuracy and fluency in basic skills and foundational knowledge	Learners can build and articulate cognitive schema that connect ideas and skills in sophisticated ways
Ingredients	<ul style="list-style-type: none"> • Hierarchical, stepwise scope and sequence • Errorless learning • Self-paced • Interleaved content (old with new) • Short frequent sessions • Strong links with Personal Learning 	<ul style="list-style-type: none"> • Thematic connected content • Trial and Error • Thinking tools compare, contrast, extrapolate • Learner metacognition • Longer sessions • Strong links with collaborative learner

How to assess depth of learning/understanding using the Achievement Statements

	Foundational Targets	Conceptual Targets
Beginning	Accurate Recall <ul style="list-style-type: none"> Ideally accuracy in excess of 90% First Focus 	With support <ul style="list-style-type: none"> Can be from adult or peer Support, nor 'doing it for them'
Expected	Quick Recall <ul style="list-style-type: none"> Ideally responses within a second (automaticity) 	Independently <ul style="list-style-type: none"> What it says on the tin!
Deeper Understanding	Applied Recall <ul style="list-style-type: none"> Accurate and quick Applied in other/new questions or contexts 	Supporting someone else <ul style="list-style-type: none"> Providing accurate support for someone else in class Explaining thinking correctly to an adult



Compass

Tracking and planning
success for learners

The Achievement Statements for Science that follow have been grouped within areas of Science, such as 'Working Scientifically', with both Foundational and Conceptual statements within each group. This way of organising is designed to be helpful to teachers when planning. There is a companion booklet of Achievement Statements in which these same statements are grouped first by Foundational vs Conceptual and then by the area of Science which may be more helpful to track attainment and identify areas for additional focus.

The Science Achievement Statements are available in EdisonLearning's online tracking system Compass.