

Science Knowledge and Skills Progression Map

Cycle 1	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants	<p>I can explore, observe and find out about different places and the environment</p> <p>I can talk about similarities and differences</p> <p>I can make observations of plants and explain why some things occur, and talk about changes</p>	<p>Fe Fi Fo Fum</p> <p>I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <p>I can identify and describe the basic structure of a variety of common flowering plants, including trees.</p>	<p>Fe Fi Fo Fum</p> <p>I can observe and describe how seeds and bulbs grow into mature plants</p> <p>I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p>Revise</p> <p><i>I can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</i></p> <p><i>I can 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</i></p> <p><i>I can investigate the way in which water is transported within plants</i></p> <p><i>I can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</i></p>		<p>I can describe the life process of reproduction in some plants</p> <p>I can give reasons for classifying plants</p> <p>I can identify how plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</p>	

Animals including Humans	<p>I understand the importance of physical activity and making healthy choices about food</p> <p>I can explore, observe and find out about people, places and the environment</p> <p>I can talk about similarities and differences</p> <p>I can make observations of animals and explain why some things occur, and talk about changes</p>	<p><i>Revise</i></p> <p><i>I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</i></p> <p><i>I can identify and name a variety of common animals that are carnivores, herbivores and omnivores</i></p> <p><i>I can describe and compare the structure of a variety of common animals</i></p>	<p>An Apple A Day Keeps the Doctor Away</p> <p>I can find out about and describe the basic needs of animals, including humans, for survival</p> <p>I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p>Food Glorious Food</p> <p>I can describe the simple functions of the basic parts of the digestive system in humans</p> <p>I can identify the different types of teeth in humans and their simple functions I can construct and interpret a variety of food chains, identifying producers, predators and prey</p> <p>I understand the things animals need to survive and stay healthy.</p> <p>I can identify the nutrients provided by a range of foods.</p> <p>Food Glorious Food</p> <p>I understand why different animals require different balances of nutrients.</p>	<p>Reproduction PHSE RHSE</p> <p>I can describe the changes as humans develop to old age</p> <p>Year 5 I know about the physical and emotional changes that occur during puberty.</p> <p>Year 6 I can explain how babies are made.</p> <p><i>Revise</i> <i>I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</i> <i>I can describe the life process of reproduction in some plants and animals</i> <i>I can describe how living things are classified into broad groups</i></p>

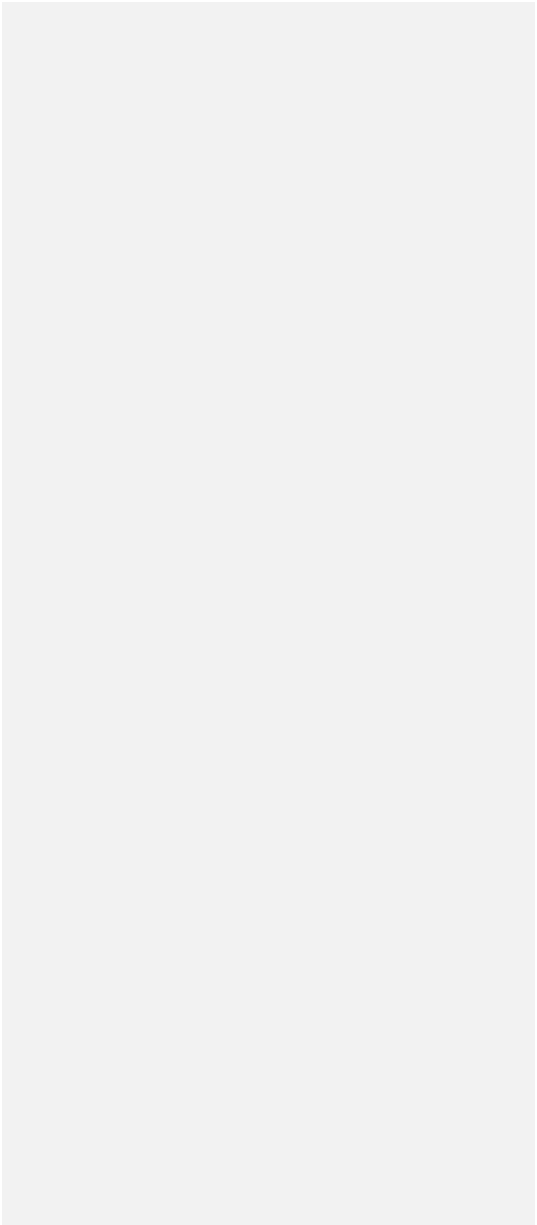
Commented [KS1]: I added Revise as thought that the italics was the same as what was above. Is that the case?

Commented [KS2]: Wouldn't Year 1 being doing this as well?

Living Things and their Habitats	<p>I can explore, observe and find out about people, places and the environment</p> <p>I can talk about how environments might vary from one another</p>	<p>Location Location Location</p> <p>I can explore and 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 and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</p> <p>I can identify and name a variety of plants and animals in their habitats, including microhabitats</p> <p>I can describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p>	<p>I can find the nutritional value of different foods.</p> <p>I can identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p> <p>Reproduction PHSE RHSE</p> <p>Year 3 “Differences”</p> <p>I can explore differences between male and female.</p> <p>I can reflect on differences between male and female other than physical differences.</p> <p>Year 4 “How Did I Get Here?”</p> <p>I can explain that a baby develops inside a mother’s womb and that both the male and female sex parts are needed to make a baby.</p> <p>I can reflect on my development from being a baby.</p> <p>I understand conception and the growth of a baby in the womb</p>	<p><i>according to common observable characteristics and based on similarities and differences</i></p> <p><i>I can give reasons for classifying plants and animals based on specific characteristics</i></p> <p><i>I recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</i></p> <p><i>I recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</i></p> <p><i>I can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</i></p>
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Everyday Materials	<p>I can talk about similarities and differences in objects and materials</p> <p>I can observe some materials and objects and can explain why some things occur and talk about changes</p>	<p>Ch Ch Ch Changes</p> <p>I can distinguish between an object and the material from which it is made</p> <p>I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</p> <p>I can describe the simple physical properties of a variety of everyday materials</p> <p>I can compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	Uses of Everyday Materials	<p>Ch Ch Ch Changes</p> <p>I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</p>	<p>Meet the Flintstones Rocks</p> <p>I can compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>I can describe in simple terms how fossils are formed when things that have lived are trapped within rock</p> <p>I recognise that soils are made from rocks and organic matter.</p> <p>Splash</p> <p>I can compare and group materials together, according to whether they are solids, liquids or gases</p> <p>I can 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)</p> <p>I can identify the part played by evaporation and condensation in the water cycle and associate the rate of</p>	<p>Magnets and Forces</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>I can compare and group together everyday materials on the basis of their properties</p> <p>I know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</p> <p>I can use knowledge of solids, liquids and gases to decide how mixtures might be separated</p> <p>I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials</p> <p>I can demonstrate that dissolving, mixing and changes of state are reversible changes</p> <p>I can explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible</p> <p>Burglar Bill Electricity</p> <p>I can 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>I can 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>I can use recognised symbols when representing a simple circuit in a diagram</p>
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Seasonal Changes	I can talk about similarities and differences weather and the seasons	Weather Watchers	I can observe the changes across the four seasons	I can observe and describe weather associated with the seasons and how day length varies.		Sound and Light	Sound	Star Gazing The Solar System (also studied in Cycle 1 in French Term 4)
	I can identify how sounds are made, associating some of them with something vibrating						I can describe the movement of the Earth and other planets relative to the sun in the solar system	
	I can observe the weather and can talk about changes						I recognise that vibrations from sounds travel through a medium to the ear	I can describe the movement of the moon relative to the Earth
							I can find patterns between the pitch of a sound and features of the object that produced it	I can describe the sun, Earth and moon as approximately spherical bodies
							I can find patterns between the volume of a sound and the strength of the vibrations that produced it	I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky
							I can recognise that sounds get fainter as the distance from the sound source increases.	<i>Revise Light</i>
								<i>I recognise that light appears to travel in straight lines</i>
								<i>I can use the idea that light travels in straight lines</i>
								<i>I can 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</i>
								<i>I can use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</i>

Working Scientifically

<p>I can observe, describing and explain what I see in simple terms</p> <p>I can ask questions to find out more</p> <p>I can compare using simple vocabulary</p> <p>I can describe a sequence of events</p> <p>I can choose and use a range of tools to explore and record</p>	<p>Fe Fi Fo Fum</p> <p>I can ask simple questions and recognise that they can be answered in different ways</p> <p>I can observe closely, using simple equipment</p> <p>I can perform simple tests</p> <p>I can identify and classify</p> <p>I can use my observations and ideas to suggest answers to questions</p> <p>I can gather and record data to help in answering questions.</p>	<p>Splash!</p> <p>I can ask relevant questions and using different types of scientific enquiries to answer them</p> <p>I can set up simple practical enquiries, comparative and fair tests</p> <p>I can make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment</p> <p>I can gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>I can report on findings from enquiries</p> <p>I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>I can identify differences, similarities or changes related to simple scientific ideas and processes</p> <p>I can use straightforward scientific evidence to answer questions or to support my findings.</p>	<p>Elementary My Dear Watson Blood Spatter</p> <p>I can plan different types of scientific enquiries to answer questions</p> <p>I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>I can record data and results of increasing complexity</p> <p>I can use test results to make predictions to set up further comparative and fair tests</p> <p>I can report and present findings from enquiries</p>

Cycle 2	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants	<p>I can explore, observe and find out about different places and the environment</p> <p>I can talk about similarities and differences</p> <p>I can make observations of plants and explain why some things occur, and talk about changes</p>	<p><i>Revise</i></p> <p><i>I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</i></p> <p><i>I can identify and describe the basic structure of a variety of common flowering plants, including trees.</i></p>	<p><i>Revise</i></p> <p><i>I can observe and describe how seeds and bulbs grow into mature plants</i></p> <p><i>I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</i></p>	<p>Where the Wild Things Are</p> <p>I can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>I can explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant</p> <p>I can investigate the way in which water is transported within plants</p> <p>I can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p> <p>I recognise that living things can be grouped in a variety of ways</p> <p>I can explore and use classification keys to help group, identify and name a variety of living things in my local and wider environment</p> <p>I recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Polar Express Darwin Detectives</p> <p>I can describe the life process of reproduction in some plants</p> <p>I can give reasons for classifying plants</p> <p>I can identify how plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</p>		

Animals including Humans	<p>I understand the importance of physical activity and making healthy choices about food</p> <p>I can explore, observe and find out about people, places and the environment</p> <p>I can talk about similarities and differences</p> <p>I can make observations of animals and explain why some things occur, and talk about changes</p>	<p>Funny Bones</p> <p>I can identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</p> <p>Let's Go Safari</p> <p>I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>I can identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>I can describe and compare the structure of a variety of common animals</p>	<p><i>Revise</i></p> <p><i>I notice that animals, including humans, have offspring which grow into adults</i></p> <p><i>I can find out about and describe the basic needs of animals, including humans, for survival</i></p> <p><i>I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</i></p>	<p><i>Revise</i></p> <p><i>I understand the things animals need to survive and stay healthy.</i></p> <p><i>I can identify the nutrients provided by a range of foods.</i></p> <p><i>I understand why different animals require different balances of nutrients.</i></p> <p><i>I can find the nutritional value of different foods.</i></p> <p><i>I can identify that humans and some other animals have skeletons and muscles for support, protection and movement</i></p> <p>Reproduction PHSE RHSE</p> <p>Year 3 "Differences"</p> <p>I can explore differences between male and female.</p> <p>I can reflect on differences between male and female other than physical differences.</p> <p>Year 4 "How Did I Get Here?"</p> <p>I can explain that a baby develops inside a mother's womb and that both the male and female sex parts are needed to make a baby.</p> <p>I can reflect on my development from being a baby.</p> <p>I understand conception and the growth of a baby in the womb</p>	<p>Heartbeats The Circulatory System</p> <p>I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>I recognise the impact of diet, exercise, drugs and lifestyle on the way my body functions</p> <p>I can describe the ways in which nutrients and water are transported within animals, including humans</p> <p>Reproduction PHSE RHSE</p> <p>I can describe the changes as humans develop to old age</p> <p>Year 5</p> <p>I know about the physical and emotional changes that occur during puberty.</p> <p>Year 6</p> <p>I can explain how babies are made.</p>
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<p>Living Things and their Habitats</p>	<p>I can explore, observe and find out about people, places and the environment</p> <p>I can talk about how environments might vary from one another</p>	<p><i>Revise</i></p> <p><i>I can explore and compare the differences between things that are living, dead, and things that have never been alive</i></p> <p><i>I can 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>I can identify and name a variety of plants and animals in their habitats, including microhabitats</i></p> <p><i>I can 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>Polar Express</p> <p>I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>I can describe the life process of reproduction in some plants and animals</p> <p>Darwin Detectives Classification and Adaptation</p> <p>I can describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences</p> <p>I can give reasons for classifying plants and animals based on specific characteristics</p> <p>I 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>I recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p> <p>I can 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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Everyday Materials	<p>I can talk about similarities and differences in objects and materials</p> <p>I can observe some materials and objects and can explain why some things occur and talk about changes</p>	<p>Singing in the Rain</p> <p>I can distinguish between an object and the material from which it is made</p> <p>I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</p> <p>I can describe the simple physical properties of a variety of everyday materials</p> <p>I can compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	Uses of Everyday Materials	<p>Singing in the Rain</p> <p>I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</p>	<p>In the Spotlight</p> <p>I recognise that they need light in order to see things and that dark is the absence of light</p> <p>I notice that light is reflected from surfaces</p> <p>I recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p> <p>I recognise that shadows are formed when the light from a light source is blocked by an opaque object</p> <p>I find patterns in the way that the size of shadows change.</p> <p>Bright Sparks</p> <p>I can identify common appliances that run on electricity</p> <p>I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</p> <p>I can 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</p> <p>I can 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>I can recognise some common conductors and insulators, and associate metals with being good conductors.</p>	<p>The Arrival Forces</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>London Eye Mystery</p> <p>I recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect</p>

Seasonal Changes	I can talk about similarities and differences weather and the seasons	<i>I can observe the changes across the four seasons</i>	<i>Seasonal changes and climate are revised and developed in Geography</i>	Revise
	I can observe the weather and can talk about changes	<i>I can observe and describe weather associated with the seasons and how day length varies.</i>		The Solar System <i>(also studied in Cycle 1 in French Term 4)</i> <i>I can describe the movement of the Earth and other planets relative to the sun in the solar system</i> <i>I can describe the movement of the moon relative to the Earth</i> <i>I can describe the sun, Earth and moon as approximately spherical bodies</i> <i>I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</i>

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Working Scientifically	<p>I can observe, describing and explain what I see in simple terms</p> <p>I can ask questions to find out more</p> <p>I can compare using simple vocabulary</p> <p>I can describe a sequence of events</p> <p>I can choose and use a range of tools to explore and record</p>	<p>Funny Bones Does the tallest person have the largest feet?</p> <p>I can ask simple questions and recognise that they can be answered in different ways</p> <p>I can observe closely, using simple equipment</p> <p>I can perform simple tests</p> <p>I can identify and classify</p> <p>I can use my observations and ideas to suggest answers to questions</p> <p>I can gather and record data to help in answering questions.</p>	<p>I can ask simple questions and recognise that they can be answered in different ways</p> <p>I can observe closely, using simple equipment</p> <p>I can perform simple tests</p> <p>I can identify and classify a wider range of things</p> <p>I can use my observations and ideas to suggest more detailed answers to questions</p> <p>I can gather and record data carefully to help in answering questions.</p>	<p>I can ask relevant questions and using different types of scientific enquiries to answer them</p> <p>I can set up simple practical enquiries, comparative and fair tests</p> <p>I can make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment</p> <p>I can gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>I can report on findings from enquiries</p> <p>I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>I can identify differences, similarities or changes related to simple scientific ideas and processes</p> <p>I can use straightforward scientific evidence to answer questions or to support my findings.</p>	<p>The Arrival Gyroscopes Polar Express Santa's Hot Chocolate</p> <p>I can plan different types of scientific enquiries to answer questions</p> <p>I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>I can record data and results of increasing complexity</p> <p>I can use test results to make predictions to set up further comparative and fair tests</p> <p>I can report and present findings from enquiries</p> <p>Darwin Detectives</p> <p>I can identify scientific evidence that has been used to support or refute ideas or arguments</p>
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