



## BECOMING REFLECTIVE, INDEPENDENT & ASPIRATIONAL LEARNERS FOR LIFE

### Immersion Curriculum: Y1/2 Cycle A

At Amberley, each unit of Science contains the key elements of - **working scientifically**, **biology** (understand plants, animals and humans, investigate living things evolution and inheritance), **chemistry** (investigate materials), **physics** (understand movement, forces and magnets, light and seeing, investigate sound and hearing, understand electrical circuits, Earth's movement in space.)



### Intent:

For all learners to have...

- The ability to think independently and raise questions about working scientifically and the knowledge and skills that it brings.
  - Confidence when using practical skills, for example, planning and carrying out scientific investigations.
- Excellent scientific knowledge and understanding which is demonstrated in written and verbal explanations, solving challenging problems and reporting scientific findings.
- A passion for science and being a scientist.

Focus:		Milestone for end of Key stage one (Year 1/2)	National Curriculum Objectives: By the end of the Key stage (Year 2)
Seasons		<ul style="list-style-type: none"><li>• Observe the apparent movement of the Sun during the day.</li><li>• Observe changes across the four seasons.</li><li>• Observe and describe weather associated with the seasons and how day length varies.</li></ul>	<p><b>Pupils should be taught to:</b></p> <ul style="list-style-type: none"><li>• observe changes across the 4 seasons</li><li>• observe and describe weather associated with the seasons and how day length varies</li><li>• asking simple questions and recognising that they can be answered in different ways</li><li>• observing closely, using simple equipment</li><li>• performing simple tests</li><li>• identifying and classifying</li><li>• using their observations and ideas to suggest answers to questions</li><li>• gathering and recording data to help in answering questions</li></ul>
Duration	Cycle		
1 week	A Term 1		
Making it Real		<p><b>Ongoing Milestones:</b></p> <ul style="list-style-type: none"><li>• Ask simple questions.</li><li>• Observe closely, using simple equipment.</li><li>• Perform simple tests.</li><li>• Identify and classify.</li><li>• Use observations and ideas to suggest answers to questions.</li><li>• Gather and record data to help in answering questions.</li></ul>	<p><b>Key Vocabulary:</b> Autumn, Spring, Summer, Winter, seasons, axis, hours, days, months of the year, earth, sun, moon, spins, movement, shadow.</p>
Scavenger hunt during the Autumn Term; looking at shadows throughout the day.			

Focus:		Milestone for end of Key stage one (Year 1/2)	National Curriculum Objectives: By the end of the Key stage (Year 2)
Forces		<ul style="list-style-type: none"><li>• Notice and describe how things move, using simple comparisons such as faster and slower.</li><li>• Compare how different things move.</li></ul>	Working scientifically: <ul style="list-style-type: none"><li>• asking simple questions and recognising that they can be answered in different ways</li><li>• observing closely, using simple equipment</li><li>• performing simple tests</li><li>• identifying and classifying</li><li>• using their observations and ideas to suggest answers to questions</li><li>• gathering and recording data to help in answering questions</li></ul>
Duration	Cycle		
2 weeks	A Term 3		
Making it Real		<b>Ongoing Milestones:</b> <ul style="list-style-type: none"><li>• Ask simple questions.</li><li>• Observe closely, using simple equipment.</li><li>• Perform simple tests.</li><li>• Identify and classify.</li><li>• Use observations and ideas to suggest answers to questions.</li><li>• Gather and record data to help in answering questions.</li></ul>	<b>Key Vocabulary:</b> Forces, push, pull, friction, comparing, faster, slower, movement.
Look at forces in the real world (playground)			

Focus:		Milestone for end of Key stage one (Year 1/2)	National Curriculum Objectives: By the end of the Key stage (Year 2)
Materials and their uses		<ul style="list-style-type: none"><li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li><li>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick/rock, and paper/cardboard for particular uses.</li></ul>	<p><b>Pupils should be taught to:</b></p> <ul style="list-style-type: none"><li>identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li><li>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li><li>asking simple questions and recognising that they can be answered in different ways</li><li>observing closely, using simple equipment</li><li>performing simple tests</li><li>identifying and classifying</li><li>using their observations and ideas to suggest answers to questions</li><li>gathering and recording data to help in answering questions</li></ul>
Duration	Cycle		
2 weeks	A Term 4		
Making it Real		<p><b>Ongoing Milestones:</b></p> <ul style="list-style-type: none"><li>Ask simple questions.</li><li>Observe closely, using simple equipment.</li><li>Perform simple tests.</li><li>Identify and classify.</li><li>Use observations and ideas to suggest answers to questions.</li><li>Gather and record data to help in answering questions.</li></ul>	<p><b>Key Vocabulary:</b> Solids, squashing, twisting, bending, stretching, suitability, materials, use.</p>
Compare materials practically, looking at everyday items and their suitability.			

Focus:	Milestone for end of Key stage one (Year 1/2)	National Curriculum Objectives: By the end of the Key stage (Year 2)
--------	--	---

Light and sound		<ul style="list-style-type: none"><li>• Observe and name a variety of sources of light, including electric lights, flames and the Sun, explaining that we see things because light travels from them to our eyes.</li><li>• Observe and name a variety of sources of sound, noticing that we hear with our ears.</li></ul>	<p>Working scientifically:</p> <ul style="list-style-type: none"><li>• asking simple questions and recognising that they can be answered in different ways</li><li>• observing closely, using simple equipment</li><li>• performing simple tests</li><li>• identifying and classifying</li><li>• using their observations and ideas to suggest answers to questions</li><li>• gathering and recording data to help in answering questions</li></ul>
Duration	Cycle		
2 weeks	A Term 5		
Making it Real		<p>Ongoing Milestones:</p> <ul style="list-style-type: none"><li>• Ask simple questions.</li><li>• Observe closely, using simple equipment.</li><li>• Perform simple tests.</li><li>• Identify and classify.</li><li>• Use observations and ideas to suggest answers to questions.</li><li>• Gather and record data to help in answering questions.</li></ul>	<p>Key Vocabulary:</p> <p>Light, sound, travelling, source.</p>
Environmental issues; eco-friendly			

<b>Focus:</b>	<b>Milestone for end of Key stage one (Year 1/2)</b>	<b>National Curriculum Objectives: By the end of the Key stage (Year 2)</b>
---------------	--	---

Humans		<ul style="list-style-type: none"><li>• Identify name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</li><li>• Notice that animals, including humans, have offspring which grow into adults.</li><li>• Investigate and describe the basic needs of animals, including humans, for survival (water, food and air).</li><li>• Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.</li><li>• <i>Identify how humans resemble their parents in many features.</i></li></ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"><li>• notice that animals, including humans, have offspring which grow into adults</li><li>• find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</li><li>• describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</li></ul>
Duration	Cycle		
2 weeks	A Term 2		
Making it Real		<p><b>Ongoing Milestones:</b></p> <ul style="list-style-type: none"><li>• Ask simple questions.</li><li>• Observe closely, using simple equipment.</li><li>• Perform simple tests.</li><li>• Identify and classify.</li><li>• Use observations and ideas to suggest answers to questions.</li><li>• Gather and record data to help in answering questions.</li></ul>	<p><b>Key Vocabulary:</b> Foetus, child, toddler, teenager, adult, elderly adult, sense, survival, water, food, air, exercise, food types, hygiene.</p>
Environmental issues; eco-friendly			



## BECOMING REFLECTIVE, INDEPENDENT & ASPIRATIONAL LEARNERS FOR LIFE

### Immersion Curriculum: Y1/2 Cycle B

At Amberley, each unit of Science contains the key elements of - **working scientifically**, **biology** (understand plants, animals and humans, investigate living things evolution and inheritance), **chemistry** (investigate materials), **physics** (understand movement, forces and magnets, light and seeing, investigate sound and hearing, understand electrical circuits, Earth's movement in space.)



#### Intent:

##### For all learners to have...

- The ability to think independently and raise questions about working scientifically and the knowledge and skills that it brings.
  - Confidence when using practical skills, for example, planning and carrying out scientific investigations.
- Excellent scientific knowledge and understanding which is demonstrated in written and verbal explanations, solving challenging problems and reporting scientific findings.
  - A passion for science and being a scientist.

Focus		Milestone for end of Key stage one (Year 1/2)	National Curriculum Objectives: By the end of the Key stage (Year 2)
Electricity		<ul style="list-style-type: none"><li>• <i>Identify common appliances that run on electricity.</i></li><li>• <i>Construct a simple series electrical circuit.</i></li></ul> <p><i>DT objective:</i></p> <ul style="list-style-type: none"><li>• Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).</li></ul>	Non Statutory
Duration	Cycle		
2 weeks	B Term 1		
Making it Real		<p><b>Ongoing Milestones:</b></p> <ul style="list-style-type: none"><li>• Ask simple questions.</li><li>• Observe closely, using simple equipment.</li><li>• Perform simple tests.</li><li>• Identify and classify.</li><li>• Use observations and ideas to suggest answers to questions.</li><li>• Gather and record data to help in answering questions.</li></ul>	<p><b>Key Vocabulary:</b></p> <p>Appliances, electricity, construct, circuit, bulb, battery, motor, buzzer, fault.</p>
Eco-friendly Saving energy Appliances in the home			



Focus		Milestone for end of Key stage one (Year 1/2)	National Curriculum Objectives: By the end of the Key stage (Year 2)
Plants		<ul style="list-style-type: none"><li>Identify and name a variety of common plants, including garden plants, wild plants and trees and those classified as deciduous and evergreen.</li><li>Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.</li><li>Observe and describe how seeds and bulbs grow into mature plants.</li><li>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</li></ul>	<p><b>Pupils should be taught to:</b></p> <ul style="list-style-type: none"><li>identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</li><li>identify and describe the basic structure of a variety of common flowering plants, including trees</li><li>observe and describe how seeds and bulbs grow into mature plants</li><li>find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li></ul>
Duration	Cycle		
2 weeks	B Term 3		
Making it Real		<p><b>Ongoing Milestones:</b></p> <ul style="list-style-type: none"><li>Ask simple questions.</li><li>Observe closely, using simple equipment.</li><li>Perform simple tests.</li><li>Identify and classify.</li><li>Use observations and ideas to suggest answers to questions.</li><li>Gather and record data to help in answering questions.</li></ul>	<p><b>Key Vocabulary:</b></p> <p>Plants, wild, garden, trees, deciduous, evergreen, flowering, roots, stem, trunk, leaves, flower, bulb, mature, water, light, temperature, grow, healthy.</p>
Looking at plants around the school; Planting seeds and looking at growth			

Focus		Milestone for end of Key stage one (Year 1/2)	National Curriculum Objectives: By the end of the Key stage (Year 2)
Properties of materials		<ul style="list-style-type: none"><li>• Distinguish between an object and the material from which it is made.</li><li>• Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.</li><li>• Describe the simple physical properties of a variety of everyday materials.</li><li>• Compare and group together a variety of everyday materials on the basis of their simple physical properties.</li></ul>	<p><b>Pupils should be taught to:</b></p> <ul style="list-style-type: none"><li>• distinguish between an object and the material from which it is made</li><li>• identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</li><li>• describe the simple physical properties of a variety of everyday materials</li><li>• compare and group together a variety of everyday materials on the basis of their simple physical properties</li></ul>
Duration	Cycle		
2 weeks	B Term 4		
Making it Real		<p><b>Ongoing Milestones:</b></p> <ul style="list-style-type: none"><li>• Ask simple questions.</li><li>• Observe closely, using simple equipment.</li><li>• Perform simple tests.</li><li>• Identify and classify.</li><li>• Use observations and ideas to suggest answers to questions.</li><li>• Gather and record data to help in answering questions.</li></ul>	<p><b>Key Vocabulary:</b></p> <p>Object, material, wood, plastic, glass, metal, water, rock, physical properties, compare, group.</p>
Looking at objects around the school and the material it is made from			

Focus		Milestone for end of Key stage one (Year 1/2)	National Curriculum Objectives: By the end of the Key stage (Year 2)
Living Things		<ul style="list-style-type: none"><li>• Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates.</li><li>• Describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles, mammals and invertebrates, including pets).</li><li>• Explore and compare the differences between things that are living, that are dead and that have never been alive.</li></ul>	<p><b>Pupils should be taught to:</b></p> <ul style="list-style-type: none"><li>• explore and compare the differences between things that are living, dead, and things that have never been alive</li><li>• 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</li><li>• identify and name a variety of plants and animals in their habitats, including microhabitats</li><li>• 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</li></ul>
Duration	Cycle		
2 weeks	B Term 5		
Making it Real		<p><b>Ongoing Milestones:</b></p> <ul style="list-style-type: none"><li>• Ask simple questions.</li><li>• Observe closely, using simple equipment.</li><li>• Perform simple tests.</li><li>• Identify and classify.</li><li>• Use observations and ideas to suggest answers to questions.</li><li>• Gather and record data to help in answering questions.</li></ul>	<p><b>Key Vocabulary:</b></p> <p>Animals, birds, fish, amphibians, reptiles, mammals, invertebrates, structure, pets, living, dead, alive.</p>
Identifying animals and habitats within our community and school grounds.			

Focus		Milestone for end of Key stage one (Year 1/2)	National Curriculum Objectives: By the end of the Key stage (Year 2)
Animals and their habitats		<ul style="list-style-type: none"><li>Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</li><li>Notice that animals, including humans, have offspring which grow into adults.</li><li>Investigate and describe the basic needs of animals, including humans, for survival (water, food and air).</li><li>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.</li><li>Identify and name a variety of plants and animals in their habitats, including micro-habitats.</li><li>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.</li></ul>	<p><b>Pupils should be taught to:</b></p> <ul style="list-style-type: none"><li>identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</li><li>identify and name a variety of common animals that are carnivores, herbivores and omnivores</li><li>describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</li></ul>
Duration	Cycle		
2 weeks	B Term 6		
<b>Making it Real</b>			
Identifying and naming common animals (including pets)		<p><b>Ongoing Milestones:</b></p> <ul style="list-style-type: none"><li>Ask simple questions.</li><li>Observe closely, using simple equipment.</li><li>Perform simple tests.</li><li>Identify and classify.</li><li>Use observations and ideas to suggest answers to questions.</li><li>Gather and record data to help in answering questions.</li></ul>	<p><b>Key Vocabulary:</b> carnivores, herbivores, omnivores, offspring, adult, habitat, suited, animals, plants, depend, habitat, micro-habitat, obtain, food chain, sources, food.</p>