



## Milestones Document - Science in Year 1



<b>Intent</b>	
<p>A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.</p>	
<b>Subject Content, Knowledge and Skills:</b>	<b>Progression outcomes</b>
<p><b>Working scientifically</b></p> <ul style="list-style-type: none"> <li>• Pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</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>	<p>I can, with prompting, ask simple questions that can be tested, e.g. about plants growing in their habitat.  I can suggest ways of answering a question  I can make relevant observations e.g. observe growth of plants they have planted.  I can, with support, conduct simple tests e.g. comparing the properties of different materials.  I can, with prompting, suggest how findings could be recorded  I can recognise findings e.g. noting how plants have changed over time.  I can gather and record data e.g. drawing structures of plants or recording changing day length, comparing and contrasting familiar plants.  I can use observations to suggest answers to questions e.g. describe how to group plants.</p>
<p><b>Plants</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> </ul>	<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><b>Animals including humans</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>	<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 (fish, amphibians, reptiles, birds and mammals, including pets)  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>

<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> </ul>	
<p><b>Everyday materials</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>	<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>
<p><b>Seasonal changes</b></p> <ul style="list-style-type: none"> <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>I can observe changes across the four seasons</p> <p>I can observe and describe weather associated with the seasons and how day length varies</p>
<p><b>Key Vocabulary and information:</b>  Environment, explore, answer questions, plants, growing, habitat, flowers, vegetables, planted, common, deciduous, evergreen, trees, plant structures, leaves, flowers blossom, petals, fruit, roots, bulb, seed, trunk, branches, stem, scientifically observing, magnifying glasses, comparing, contrasting, describing, identify, group, diagrams, records, take care, return safely, familiar, common, fish, amphibians, reptiles, birds, mammals, pets, body parts, head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth, observations, first hand, describing, identify, group, senses, textures, sounds and smells, discuss, raise, everyday materials, properties, hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent, experiment, variety, brick, paper, fabrics, elastic, foil, observe, weather, seasons, simple tests, questions, tables, charts.</p> <p>Note: Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses.</p>	<p><b>Building on from...</b>  <u>Knowledge and understanding of the world</u>  Children explore creatures, people, plants and objects in their natural environments. They observe and manipulate objects and materials to identify differences and similarities. Children also learn to use their senses, feeling dough or listening to sounds in the environment, such as sirens or farm animals. To ask and answer questions about why things happen and how things work.</p> <p><u>Physical development</u>  Awareness of space. To recognise changes that happen to the body when they are active. The importance of keeping healthy and the things that contribute to this by, for example, cooking or identifying fruit and vegetables.</p> <p><u>Creative development</u>  Children explore and respond to a variety of sensory experiences through music and art. They explore colour, texture, shape, form and space by mixing colours, painting, modelling and dancing. They also learn about sounds - how they can be changed and how to imitate sounds they hear.</p> <p><b>What comes next...</b>  Year 2 science curriculum</p> <ul style="list-style-type: none"> <li>Working scientifically</li> </ul> <p>Pupils continue to observe closely, classify, ask questions and gather and record data. They carry out simple tests to classify, identify patterns and make observations over time. They use their knowledge from year 1 and start to make comparisons.</p>

- Plants

Pupils study seeds and bulbs and learn the requirements for plant growth.

- Animals including humans

Pupils find out about the offspring of animals and that they need food, water and air to survive. They look at exercise, food and hygiene.

- Living things and their habitats

Pupils should look at things that are living, dead and have never been alive. They learn that animals and plants live in different habitats and that they depend on each other for survival. They look at specific plants and animals and their microhabitats, this leads on to food chains.

- Everyday materials

They assess the suitability of materials for different products and they look at the properties of solid objects and how they can be pushed/ squeezed etc.