

Bolham Primary School Science Progression Map – Key Stage One

Scientific Knowledge and Conceptual Understanding

Introduction:

As stated in the National Curriculum, the objectives are separated into the separate year groups, however, there is no requirement for them to be taught in that specific year. This means that with our mixed year group classes, it is essential that the areas are covered through our rolling programme, but it does not matter if Year One children are taught Year Two requirements and vice versa.

EYFS: Make comments about what they have heard and ask questions to clarify their understanding.

Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.

Explore the natural world around them, making observations and drawing pictures of animals and plants.

Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.

Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Programme of study	Year One	Year Two
Plants	<ul style="list-style-type: none"> • Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • Identify and describe the basic structure of a variety of common flowering plants, including trees 	<ul style="list-style-type: none"> • Observe and describe how seeds and bulbs grow into mature plants • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy
Animals, including humans	<ul style="list-style-type: none"> • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • Identify and name a variety of common animals that are carnivores, herbivores and omnivores • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense 	<ul style="list-style-type: none"> • Notice that animals, including humans, have offspring which grow into adults • Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) • Describe the importance for humans of exercise, eating the right amounts of different type of food, and hygiene
Materials	<p>Everyday materials</p> <ul style="list-style-type: none"> • Distinguish between an object and the materials from which it is made 	<p>Use of everyday materials</p> <ul style="list-style-type: none"> • Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic,

	<ul style="list-style-type: none"> Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock Describe the simple physical properties of a variety of everyday materials Compare and group together a variety of everyday materials on the basis of their simple physical properties 	<p>glass, brick, rock, paper and cardboard for particular uses</p> <ul style="list-style-type: none"> Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching
Seasonal changes	<ul style="list-style-type: none"> Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies 	
Living things and their habitats		<ul style="list-style-type: none"> Explore and compare the differences between things that are living, dead, and things that have never been alive 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 Identify and name a variety of plants and animals in their habitats, including micro-habitats 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

Working Scientifically

Introduction:

There are six objectives for Working Scientifically across Key Stage One. The requirements should be covered by the end of the key stage, so there is no requirement for certain objectives to be covered in a specific year group. In Key Stage One at Bolham, we have grouped them into four categories. There are then suggestions for which subject areas these should be covered in.

National Curriculum objectives	Detailed objectives	Year One	Year Two
Asking questions and carrying out fair and comparative tests	<ul style="list-style-type: none"> Explore the world around them, leading them to ask some simple scientific questions about how and why things happen 	<u>Plants</u> - Identify and describe the basic structure of a variety of common flowering plants, including trees.	<u>Plants</u> - Find out and describe how plants need water, light and a suitable

<ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways. Performing simple tests 	<ul style="list-style-type: none"> Begin to recognise ways in which they might answer scientific questions Ask people questions and use simple secondary sources to find answers Carry out simple practical test, using simple equipment Experience different types of scientific enquiries, including practical activities Talk about the aim of scientific test they are working on With support, start to recognise a fair test 	<p><u>Animals, including humans</u></p> <ul style="list-style-type: none"> Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). <p><u>Materials</u></p> <ul style="list-style-type: none"> Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties. 	<p>temperature to grow and stay healthy.</p> <p><u>Animals, including humans</u></p> <ul style="list-style-type: none"> Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different type of food, and hygiene. <p><u>Materials</u></p> <ul style="list-style-type: none"> Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
<p>Observing and measuring changes</p> <ul style="list-style-type: none"> Observing closely, using simple equipment 	<ul style="list-style-type: none"> Observe the natural and humanly constructed world around them Observe changes over time Use simple measurements and equipment Make careful observations, sometimes using equipment to help them observe carefully 	<p><u>Plants</u></p> <ul style="list-style-type: none"> Identify and describe the basic structure of a variety of common flowering plants, including trees. <p><u>Materials</u></p> <ul style="list-style-type: none"> Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties. <p><u>Seasonal changes</u></p>	<p><u>Plants</u></p> <ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. <p><u>Materials</u></p> <ul style="list-style-type: none"> 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><u>Living things and their habitats</u></p>

		<ul style="list-style-type: none"> - Observe changes across the four seasons. - Observe and describe weather associated with the seasons and how day length varies. 	<ul style="list-style-type: none"> - Identify and name a variety of plants and animals in their habitats, including micro-habitats. - 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>Identifying, classifying, recording and presenting data</p> <ul style="list-style-type: none"> • Identify and classifying • Gathering and recording data to help in answering questions 	<ul style="list-style-type: none"> • Use simple features to compare objects, materials and living things • Decide how to sort and classify objects into simple groups with some help • Record and communicate findings in a range of ways with support • Sort, group, gather and record data in a variety of ways to help in answering questions such as in simple sorting diagrams, pictograms, tally charts, block diagrams and simple tables 	<p><u>Plants</u></p> <ul style="list-style-type: none"> - Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. <p><u>Animals, including humans</u></p> <ul style="list-style-type: none"> - Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. - Identify and name a variety of common animals that are carnivores, herbivores and omnivores. - Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). - 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><u>Materials</u></p>	<p><u>Plants</u></p> <ul style="list-style-type: none"> - Observe and describe how seeds and bulbs grow into mature plants. - Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. <p><u>Materials</u></p> <ul style="list-style-type: none"> - 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><u>Living things and their habitats</u></p> <ul style="list-style-type: none"> - Explore and compare the differences between things that are living, dead, and things that have never been alive. - 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

		<ul style="list-style-type: none"> - Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. - Describe the simple physical properties of a variety of everyday materials. - Compare and group together a variety of everyday materials on the basis of their simple physical properties. 	<p>animals and plants, and how they depend on each other.</p> <ul style="list-style-type: none"> - Identify and name a variety of plants and animals in their habitats, including micro-habitats.
<p>Drawing conclusions, noticing patterns and presenting findings</p> <ul style="list-style-type: none"> • Using their observations and ideas to suggest answers to questions 	<ul style="list-style-type: none"> • Notice links between cause and effect with support • Begin to notice patterns and relationships with support • Begin to draw simple conclusions • Identify and discuss differences between their results • Use simple and scientific language • Read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at Key Stage One • Talk about their findings to a variety of audiences in a variety of ways 	<p><u>Animals, including humans</u></p> <ul style="list-style-type: none"> - Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). <p><u>Materials</u></p> <ul style="list-style-type: none"> - Describe the simple physical properties of a variety of everyday materials. - Compare and group together a variety of everyday materials on the basis of their simple physical properties. 	<p><u>Animals, including humans</u></p> <ul style="list-style-type: none"> - Describe the importance for humans of exercise, eating the right amounts of different type of food, and hygiene. <p><u>Materials</u></p> <ul style="list-style-type: none"> - Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. - Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. <p><u>Living things and their habitats</u></p> <ul style="list-style-type: none"> - 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



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