



St Helen's Catholic Infant School Progression of Topics and Skills in Science



Plants Yellow highlighting Science and RSHE links

EYFS	YEAR 1	YEAR 2
<p>3- 4yr olds</p> <p>Communication and Language • Understand 'why' questions, Understanding the World Use all their senses in hands-on exploration of natural materials. Talk about what they see, using a wide vocabulary. Explore how things work. Plant seeds and care for growing plants. Understand the key features of the life cycle of a plant and an animal. Begin to understand the need to respect and care for the natural environment and all living things.</p> <p>Reception Communication and Language • Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. Use new vocabulary in different contexts.</p>	<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. <hr/> <p><u>End of KS1 Expectation</u> Plants Pupils should be taught to:</p> <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• 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.

Understanding the World

Explore the natural world around them.

Describe what they see, hear and feel while they are outside.

Recognise some environments that are different to the one in which they live.

Understand the effect of changing seasons on the natural world around them.

ELG**Communication and Language -Listening,Attention and Understanding**

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

Understanding the World- The Natural World

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.

Progression of Vocabulary in Science



Plants

EYFS	YEAR 1	YEAR 2
Plant, tree Name common everyday/seasonal plants	Common wild plants, garden plants, deciduous, evergreen. Parts of a tree – trunk, branches, leaf, root. Parts of a plant – leaf, root, leaves, bud, flowers, blossom, petals, stem Vegetables Bulb Seed	Water, light, suitable temperature, grow, healthy, germination, reproduction.

St Helen's Catholic Infant School Progression of Topics and Skills in Science



Animals, including Humans

EYFS	YEAR 1	YEAR 2
<p><u>Personal, Social and Emotional Development</u></p> <p>3-4 years</p> <p>Make healthy choices about food, drink, activity and toothbrushing.</p> <p>Reception</p> <p>Know and talk about the different factors that support their overall health and wellbeing:</p> <ul style="list-style-type: none"> - regular physical activity - healthy eating - toothbrushing - sensible amounts of 'screen time' - having a good sleep routine - being a safe pedestrian <p>ELG</p> <p>Managing Self • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</p> <p><u>Communication and Language</u> •</p> <p>3-4 years</p> <p>Understand 'why' questions,</p> <p>Reception</p> <p>Learn new vocabulary.</p> <p>Ask questions to find out more and to check what has been said to them.</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. 	<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 types of food, and hygiene. <p><u>End of KS1 Expectation</u></p> <p><u>Animals, including humans</u></p> <p>Pupils should be taught to:</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 • notice that animals, including humans, have offspring which grow into adults

Articulate their ideas and thoughts in well-formed sentences.

Describe events in some detail.

Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.

Use new vocabulary in different contexts.

ELG

Listening, Attention and Understanding

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

Understanding the World

3-4 years

Talk about what they see, using a wide vocabulary.

Understand the key features of the life cycle of a plant and an animal.

Begin to understand the need to respect and care for the natural environment and all living things.

Reception

Explore the natural world around them.

Describe what they see, hear and feel while they are outside.

Recognise some environments that are different to the one in which they live.

ELG

The Natural World

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.

- 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 types of food, and hygiene.

Progression of Vocabulary in Science

Animals, including Humans

EYFS	YEAR 1	YEAR 2
Naming lots of animals – farm, arctic, zoo, pets animals. Animal parts - head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth. Fur	Common animals, fish, amphibians, reptiles, birds, mammals, pets, carnivores, herbivores, omnivores. Animal parts – head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth.	Offspring (for example: egg-chick-chicken, egg-caterpillar-pupa-butterfly), grow, adults, nutrition, reproduce Survival – water, food, air, exercise, hygiene.

St Helen's Catholic Infant School Progression of Topics and Skills in Science



Materials and their properties

EYFS	YEAR 1	YEAR 2
<p>3- 4yr olds</p> <p>Communication and Language</p> <p>Understand 'why' questions</p> <p>Understanding the World</p> <p>Use all their senses in hands-on exploration of natural materials.</p> <p>Explore collections of materials with similar and/or different properties.</p> <p>Talk about what they see, using a wide vocabulary.</p> <p>Explore how things work.</p> <p>Talk about the differences between materials and changes they notice.</p> <p>Reception</p> <p>Communication and Language</p> <p>Learn new vocabulary.</p> <p>Ask questions to find out more and to check what has been said to them.</p> <p>Articulate their ideas and thoughts in well-formed sentences.</p> <p>Describe events in some detail.</p> <p>Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.</p> <p>Use new vocabulary in different contexts.</p> <p>Understanding the World</p> <p>Explore the natural world around them.</p>	<ul style="list-style-type: none"> • distinguish between an object and the material from which it is made • 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. 	<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>End of KS1 Expectation</p> <p>Everyday materials</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • distinguish between an object and the material from which it is made • 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 • identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses

Describe what they see, hear and feel while they are outside.

ELG

Communication and Language -

Listening, Attention and Understanding

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

Understanding the World

The Natural World

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

- find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Progression of Vocabulary in Science



Materials and their properties

EYFS	YEAR 1	YEAR 2
Material – wood, plastic, metal.	Material – wood, plastic, glass, metal, water, rock Properties – hard/soft, stretchy/stiff, shiny/dull, rough/smooth, bendy/not bendy, waterproof/not waterproof, absorbent/not absorbent. Brick, paper, fabrics, elastic, foil.	Material – wood, metal, plastic, glass, brick, rock, paper, cardboard. Squashing, twisting, bending, stretching. Charles Macintosh, John Dunlop.

St Helen's Catholic Infant School Progression of Topics and Skills in Science

Seasonal Changes

EYFS	YEAR 1	YEAR 2
3- 4yr olds Communication and Language Understand 'why' questions, Understanding the World Explore how things work. Begin to understand the need to respect and care for the natural environment and all living things. <ul style="list-style-type: none"> • Explore and talk about different forces they can feel. • Talk about the differences between materials and changes they notice. Reception Communication and Language Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. Use new vocabulary in different contexts. Understanding the World Explore the natural world around them. Describe what they see, hear and feel while they are outside.	<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. 	Not taught <u>End of KS1 Expectation</u> <u>Seasonal changes</u> Pupils should be taught to: <ul style="list-style-type: none"> • observe changes across the 4 seasons • observe and describe weather associated with the seasons and how day length varies

Recognise some environments that are different to the one in which they live.

Understand the effect of changing seasons on the natural world around them.

ELG

Communication and Language Listening, Attention and Understanding

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

Understanding the World

The Natural World

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.

Progression of Vocabulary in Science

Seasonal Changes

EYFS	YEAR 1	YEAR 2
Day, night, midnight Seasons – Spring, Summer, Autumn, Winter Weather – wind, rain, snow, fog, sun, hot, warm, cold.	Season – Summer, Winter, Autumn, Spring Day, daytime, night, dark, light, daylight Weather – wind, rain, snow, hail, sleet, fog, sun, hot, warm, cold.	NOT TAUGHT

St Helen's Catholic Infant School Progression of Topics and Skills in Science



Living things and their habitats

EYFS	YEAR 1	YEAR 2
<p>Communication and Language • 3-4 years Understand 'why' questions, Reception Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. Use new vocabulary in different contexts.</p> <p>ELG Listening, Attention and Understanding Make comments about what they have heard and ask questions to clarify their understanding.</p> <p>Understanding the World 3-4 years Talk about what they see, using a wide vocabulary.. Begin to understand the need to respect and care for the natural environment and all living things.</p> <p>Reception Explore the natural world around them. Describe what they see, hear and feel while they are outside.</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 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. <p><u>End of KS1 Expectation</u> <u>Living things and their habitats</u> Pupils should be taught to:</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 animals and plants, and how they depend on each other

Recognise some environments that are different to the one in which they live.

ELG

The Natural World

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.

- identify and name a variety of plants and animals in their habitats, including microhabitats
- 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

Progression of Vocabulary in Science

Living things and their habitats

EYFS	YEAR 1	YEAR 2
Things we can see in immediate environment – for example, worms burrowing and living things outside.	NOT TAUGHT	Living, dead, never alive, habitats, micro-habitats, food, food chain (sun-grass-cow-human), alive, healthy. Shelter, seashore, woodland, ocean, rainforest. Conditions - Hot/warm/cold/dry/damp/wet/bright/shade/dark.

St Helen's Catholic Infant School Progression of Topics and Skills in Science



The National Curriculum states that: During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions

St Helen's Catholic Infant School progression of scientific skills:

EYFS	YEAR 1	YEAR 2
<p>Key scientific skills in EYFS are : Play, Observe . Ask , Discover , Explore</p> <p>Communication and Language 3- 4yr olds Understand 'why' questions, .</p> <p>Understanding the World Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. Explore how things work. Talk about the differences</p>	<p>1) asking simple questions and recognising that they can be answered in different ways 2) observing closely, using simple equipment and measurement 3) performing simple tests 4) identifying and classifying 5) using their observations and ideas to suggest answers to questions 6) gathering and</p>	<p>1) asking simple questions and recognising that they can be answered in different ways including use of scientific language from the National Curriculum. 2) observing closely, using simple equipment and measurement, including changes over time. 3) performing simple comparative tests 4) identify, group and classify 5) using their observations and ideas to suggest answers to questions, noticing similarities, differences and patterns.</p>

<ul style="list-style-type: none"> • <p>Reception</p> <p>Communication and Language</p> <p>Learn new vocabulary.</p> <p>Ask questions to find out more and to check what has been said to them.</p> <p>Articulate their ideas and thoughts in well-formed sentences.</p> <p>Describe events in some detail.</p> <p>Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.</p> <p>Use new vocabulary in different contexts.</p> <p>Understanding the World •</p> <p>Explore the natural world around them.</p> <p>Describe what they see, hear and feel while they are outside.</p> <p>Recognise some environments that are different to the one in which they live.</p> <p>Understand the effect of changing seasons on the natural world around them.</p> <p>ELG</p> <p>Communication and Language</p> <p>Listening</p> <p>Attention and Understanding</p> <p>Make comments about what they have heard and ask questions to clarify their understanding.</p> <p>Understanding the World</p> <p>The Natural World</p> <p>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.</p>	<p>recording data to help in answering questions.</p>	<p>6) gathering, recording and communicating data and findings to help in answering questions.</p> <p>7) use scientific language and read and spell age-appropriate scientific vocabulary</p> <p>8) begin to notice patterns and relationships.</p> <hr/> <p><u>End of KS1 Expectation</u></p> <p><u>Working scientifically</u></p> <p>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <p>asking simple questions and recognising that they can be answered in different ways</p> <p>observing closely, using simple equipment</p> <p>performing simple tests</p> <p>identifying and classifying</p> <p>using their observations and ideas to suggest answers to questions</p> <p>gathering and recording data to help in answering questions</p>
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Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Progression of Vocabulary in Science for Working scientifically

EYFS	Y1	Y2
test question equipment answer look at watch explore choose find the same different	questioning answering observe record group sort chart equipment changes over time.	identify classify bar chart table data diagram compare contrast patterns relationships findings