



## CURRICULUM PROGRESSION STRAND MAP

### Curriculum Intent: science

To enable these outcomes, our science curriculum is designed to...

- To develop a sense of awe and wonder in the world around them.
- To progressively develop the ability to work scientifically and be able to carry out simple tests and experiments using equipment and be able to gather and record data.
- To be curious about natural phenomena and to be excited by the process of understanding the world around them.
- To ensure that children know how to question and think scientifically
- To use science as a way to explain and answer questions , to be able to think scientifically

National Curriculum Science Programmes of Study: <https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study#key-stage-1>

### Character Development through science

**Our Science curriculum at Riverview will enable children to develop the following character traits throughout their three years at Riverview:**

- **Moral:** Become honest, respectful and caring citizens by thinking of the world around them.
- **Social:** Develop social skills, including: communication, collaboration, determination and working collaboratively.
- **Cultural:** Recognise the importance of science and how thinking scientifically will help them understand the world around them.
- **Knowledge:** Become independent, resilient and resourceful in their understanding of the world around them, inside and outside of their classroom.
- **Skills:** Encourage and develop observation, questioning, problem-solving and evaluation skills.
- **Professional:** Support others to question the world around them and to think about how they could answer them.

### Enrichment – science

- Science day
- Knowledge and Understanding of the World Week
- A science themed assembly
- Science display to celebrate children's achievement and science display across the year groups
- Various trips across the year groups, e.g. reception – Tyland Barn , yr2 – Science museum
- Use of extensive school grounds, including quad area and an eco club.



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## Subject: Science

### Character Development through

EYFS	Year 1	Year 2
<ul style="list-style-type: none"> <li>To show an interest in the world around them and notice similarities and differences between themselves/others and where they live and different climates/countries.</li> <li>To show an interest in different materials.</li> </ul>	<ul style="list-style-type: none"> <li>To begin to recognise the differences and similarities in the world around them</li> <li>To start to understand lifecycles (including simple food chains) and how they can affect other animals/humans</li> <li>To realise they can ask questions (about the world around them) and how they can start to answer them</li> <li>To start to observe and use simple equipment and to start to realise 'things' can be measured</li> </ul>	<ul style="list-style-type: none"> <li>To recognise the differences and similarities in the world around them and give some reasons – link to habitats</li> <li>To understand lifecycles (including food chains) and how they can affect other animals/humans</li> <li>To realise they can ask questions (about the world around them) and how they can start to answer them especially fair testing, and why you may want to find out</li> <li>To observe and use simple equipment more independently and to realise 'things' can be measured and how they could do this</li> </ul>

### Skills and Knowledge Progression

#### Area of Study: KS1 Working Scientifically

EYFS	Year 1	Year 2
<p>Covered by - Understanding the World, People and communities, The world, Technology</p> <p style="color: red;">30- 50 Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. •Can talk about some of the things they have observed such as plants, animals, natural and found objects. •Talks about why things happen and how things work. •Developing an understanding of growth, decay and changes over time. •Shows care and concern for living things and the environment.</p> <p>40 – 60 Early Learning Goal Children know about similarities and differences in relation to places,</p>	<p>Pupils will be taught to use the following practical scientific methods, processes and skills:</p> <p>WS1 asking simple questions and recognising that they can be answered in different ways</p> <p>WS2 observing closely, using simple equipment and measurement</p> <p>WS3 performing simple tests</p> <p>WS4 identifying and classifying</p> <p>WS5 using their observations and ideas to suggest answers to questions</p> <p>WS6 gathering, recording and communicating data and findings to help in answering questions.</p> <p>WS7 use scientific language and read and spell age-appropriate scientific vocabulary</p>	<p>Pupils will be taught to use the following practical scientific methods, processes and skills, they will also be able to have more choice in the way they record/collect data:</p> <p>WS1 asking simple questions and recognising that they can be answered in different ways</p> <p>WS2 observing closely, using simple equipment and measurement</p> <p>WS3 performing simple tests with less support</p> <p>WS4 identifying and classifying in different ways</p> <p>WS5 using their observations and ideas to suggest answers to questions and how they could answer them</p>



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<p>objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.</p>	<p>WS8 begin to notice patterns and relationships.</p>	<p>WS6 gathering, recording and communicating data and findings to help in answering questions. Deciding how they can record. WS7 use scientific language and read and spell age-appropriate scientific vocabulary WS8 begin to notice patterns and relationships and to see connections.</p>
<b>Outcome:</b>	<b>Outcome:</b>	<b>Outcome:</b>
<b>Area of Study: plants</b>		
EYFS	Year 1	Year 2
<p>30- 50 Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. •Can talk about some of the things they have observed such as plants, animals, natural and found objects. •Talks about why things happen and how things work. •Developing an understanding of growth, decay and changes over time. •Shows care and concern for living things and the environment.</p> <p>Early Learning Goal Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.</p>	<p>P1 identify and name a variety of common wild and garden plants, including deciduous and evergreen trees P2 identify and describe the basic structure of a variety of common flowering plants, including trees.</p>	<p>P1 observe and describe how seeds and bulbs grow into mature plants P2 find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>
<b>Area of Study: Uses of Everyday Materials</b>		
EYFS	Year 1	Year 2
<p>30- 50 Comments and asks questions about aspects of their familiar world such as the place</p>	<p>EM1 distinguish between an object and the material from which it is made</p>	<p>EM1 identify and compare the suitability of a variety of everyday materials, including wood,</p>



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<p>where they live or the natural world. •Can talk about some of the things they have observed such as natural and found objects. •Talks about why things happen and how things work.</p> <p>Early Learning Goal Children know about similarities and differences in relation to objects and materials. They talk about the features of their own immediate environment and how environments might vary from one another.</p>	<p>EM2 identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</p> <p>EM3 describe the simple physical properties of a variety of everyday materials</p> <p>EM4 compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	<p>metal, plastic, glass, brick, rock, paper and cardboard for particular uses ☒</p> <p>EM2 find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>
<p><b>Area of Study: Everyday Seasonal Changes</b></p>		
<p style="text-align: center;">EYFS</p>	<p style="text-align: center;">Year 1</p>	<p style="text-align: center;">Year 2</p>
<p>30- 50 Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world.</p> <p>Can talk about some of the things they have observed such as plants, animals, natural and found objects.</p> <p>Talks about why things happen</p> <p>Developing an understanding of growth, decay and changes over time.</p> <p>Shows care and concern for living things and the environment.</p> <p>Early Learning Goal Children - They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.</p>	<p>SC1 observe changes across the four seasons</p> <p>SC2 observe and describe weather associated with the seasons and how day length varies.</p>	<p>Year 2 develop this by having a new topic called Living Things and their Habitats – this lets them look at the following that are affected by seasonal changes</p> <p>LH2 identify that most living things live in habitats to which they are suited</p> <p>LH3 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>LH4 identify and name a variety of plants and animals in their habitats, including micro-habitats</p>
<p><b>Area of Study: Animals including humans</b></p>		
<p style="text-align: center;">EYFS</p>	<p style="text-align: center;">Year 1</p>	<p style="text-align: center;">Year 2</p>



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<p>30- 50 Comments and asks questions about aspects of their familiar world such the natural world. Can talk about some of the things they have observed such as animals. Developing an understanding of growth, decay and changes over time. Shows care and concern for living things and the environment.</p> <p>Early Learning Goal Children know about similarities and differences in relation to living things. They make observations of animals and explain why some things occur, and talk about changes.</p>	<p>AH1 identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals AH2 identify and name a variety of common animals that are carnivores, herbivores and omnivores AH3 describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) AH4 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>AH1 notice that animals, including humans, have offspring which grow into adults AH2 find out about and describe the basic needs of animals, including humans, for survival (water, food and air) AH3 describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>
<p><b>Area of Study: Living Things and their Habitats – year 2 topic that is continued in year 4</b></p>		
<p>EYFS</p>	<p>Year 1</p>	<p>Year 2</p>
<p>30- 50 Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. •Can talk about some of the things they have observed such as plants and animals. Shows care and concern for living things and the environment.</p> <p>Early Learning Goal Children know about similarities and differences in relation to places and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.</p>		<p>LH1 explore and compare the differences between things that are living, dead, and things that have never been alive LH2 identify that most living things live in habitats to which they are suited LH3 describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other LH4 identify and name a variety of plants and animals in their habitats, including micro-habitats LH5 describe how animals obtain their food from plants and other animals LH6 understand a simple food chain, and identify and name different sources of food.</p>