

Science - Threads of learning

A thread of learning shows how a ‘concept’ is taught from Nursery to Year 6 through the EYFS curriculum and in the IPC units of work. All parts of the EYFS curriculum build the ‘foundational skills’ of science.. Some concepts are from the National Curriculum directly, some from the IPC and some will be interwoven throughout the curriculum.

KEY CONCEPTS	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working Scientifically	<p>Use all their senses in hands-on exploration A1 and Sp1</p> <p>Explore different materials, using all their senses to investigate them A1</p> <p>Talk about what they see using a wide vocabulary A2</p> <p>Be curious and interested to explore new and familiar experiences A2</p> <p>Talk about differences between materials A2</p>	<p>Ask questions to find out more and check they understand A2 and Sp1</p> <p>Ask questions relevant to theme Sp1</p> <p>Talk about selected non-fiction, including new knowledge and vocabulary Sp1</p> <p>Connect one idea or action to another Sp1</p> <p>Follow a sequence of instructions Sp2</p> <p>Develop skills such as prediction and recall Sum1</p> <p>Ask questions to clarify their</p>	<p>1.04 Be able to follow guided experiments to try to answer scientific questions (S) Brainwave: The Brain Time Travellers Green Fingers</p>	<p>1.04 Be able to follow guided experiments to try to answer scientific questions (S) Superhumans Buildings Look and Listen! The Magic Toymaker</p>	<p>2.04 Be able to ask scientific questions Bright Sparks How Humans Work Shake It</p>	<p>2.04 Be able to ask scientific questions Making Waves Land Sea Sky Let’s Plant It</p>	<p>3.04 Be able to suggest testable questions Space Scientists</p>	<p>3.04 Be able to suggest testable questions Fairgrounds Full Power</p>

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	<p>Beginning to understand why and how questions Sp1</p> <p>Identify familiar objects and properties when they are described A2</p> <p>Talks about why things happen and how things work Sp1</p> <p>Uses talk to explain what is happening and anticipate what might happen next Sum1</p>	<p>understanding Sum 2</p> <p>Explain how things work and why they might happen Sum 2</p>						
Plants	(Nursery)	(Reception)	<p>1.18 Know that seeds can grow into plants Green Fingers The Earth Our Home</p>	<p>1.18 Know that seeds can grow into plants Live and Let Live</p>	<p>2.18 Know the lifecycle of various plants Land Sea Sky Let's Plant It</p>		<p>3.18 Know about pollination, fertilisation and methods of seed dispersal Roots Shoots Fruits</p>	

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<p>Learning Questions (Plants)</p>	<p>(Nursery)</p>	<p>(Reception)</p>	<p><u>Green Fingers</u> Do all seeds need the same conditions to grow? (Task 4)</p> <p>Do all plants follow the same life cycle? (Task 7)</p> <p>What are the names of the different parts of the plants? (Task 8)</p> <p>Flowers and plants are interdependent. What does this mean? (Task 10)</p> <p><u>The Earth our Home</u> Can you recognise different types of trees? (Task 3) In what ways do animals and plants depend on each other? (Task 6)</p>	<p><u>Live And Let Live</u> Do all seeds grow the same way? (Task 6)</p> <p>What do all living things need to stay alive?</p>	<p><u>Land Sea Sky</u> What has happened to the planted beans over time? (Task 8)</p> <p><u>Let's Plant It</u> Why do plants have to scatter seeds?</p>		<p><u>Roots, Shoots & Fruits</u></p> <p>Why/how do some flowers attract more bees and butterflies? (Task 4)</p> <p>Do all seeds germinate in the same way? (Task 6)</p> <p>What are the different forms of seed dispersal? (Task 7)</p>	
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<p>Biology: Humans and Animals</p>	<p>Shows care and concern for living things Sum1</p>	<p>Make detailed observations and drawings of animals Sum1</p> <p>Make observations of animals and plants Sum1</p>	<p>1.14</p> <p>Know the names of the main external body parts of humans and animals</p> <p>The Earth Our Home</p>	<p>1.14 (KK)</p> <p>Know the names of the main external body parts of humans and animals</p> <p>Superhumans Live and Let Live Look and Listen!</p>	<p>2.14</p> <p>Know about the functions of skeletons and muscles in humans and some other animals</p> <p>How Humans Work</p>	<p>2.14</p> <p>Know about the functions of skeletons and muscles in humans and some other animals</p> <p>Land Sea Sky</p>	<p>3.14</p> <p>Know the functions of the major internal and external parts of the human body</p> <p>Space Scientists Being Human</p>	<p>3.14</p> <p>Know the functions of the major internal and external parts of the human body</p>
<p>Learning Questions (Biology: Humans and Animals)</p>	<p>(Nursery)</p>	<p>(Reception)</p>	<p><u>The Earth Our Home</u></p>	<p><u>Superhumans</u></p> <p>Can you name 10 different body parts? (Task 1)</p> <p><u>Look and Listen!</u></p> <p>What are the seven characteristics of living things? (Task 1)</p>	<p><u>How Humans Work</u></p> <p>What is the function of the skeleton and the bones within it? (Tasks 7 & 8)</p> <p>What are the function of key muscles within the body? (Tasks 9 & 10)</p>	<p><u>Land Sea Sky</u></p> <p>How is a fish different and similar to a human? (2.14 Task 5)</p> <p>How are divers, swimmers and wader birds the same and different? (Task 6)</p>	<p><u>Being Human</u></p> <p>What are the functions of each bone? (Task 1, part 1)</p> <p>How does the circulatory system work? (Task 2 Part 1)</p> <p>How does food and water get absorbed by our body?</p>	

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<p>Biology: Living Things</p>		<p>Begin to understand the effect their behaviour can have on the environment Sum 2</p>	<p>1.24 Understand that people share environments with other living things Green Fingers The Earth Our Home</p>	<p>1.24 Understand that people share environments with other living things (U) Live and Let Live</p>	<p>2.24 Understand the positive and negative impacts humans have on other living things</p>	<p>2.24 Understand the positive and negative impacts humans have on other living things Land Sea Sky</p>	<p>3.24 Understand the effects that changes in the environment may have on living things</p>	<p>3.24 Understand the effects that changes in the environment may have on living things Existing, Endangered, Extinct Being Human</p>
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Autumn

Spring

Summer