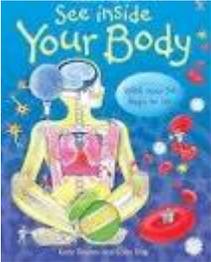
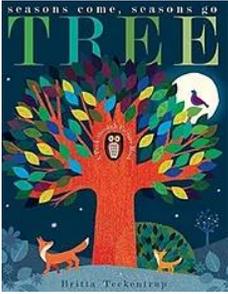


Curriculum Coherence – Year 1 Science



Term 1

Prior Learning/Starting Points - ELG – Understanding The world: 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 to another. Children know some of the things that make them unique and can talk about some of the similarities and differences in relation to friends or family. They can look closely at similarities, differences, patterns and change and can make observations of animals and plants and explain why some things occur and talk about changes.

INTENT	IMPLEMENTATION	IMPACT
<p>KNOWLEDGE /NC objectives</p> <p>Identify, name, draw and label the basic parts of the human body.</p> <p>Say which part of the body is associated with each sense.</p> <p>Observe changes across the 4 seasons focussing on the change from AUTUMN to WINTER.</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p>	<p>ACTIVITIES</p> <p>Observe and describe changes in the seasons and days from Autumn to Winter.</p> <p>Games and songs associated with naming the body parts.</p> <p>Exploration of the skeleton and body, creating a labelled model of the human body.</p> <p>STEM Opportunities to explore their senses – designing and making perfumes.</p> <p>Keeping record of temperatures over the half term to track the seasonal changes in weather.</p>	<p>OUTCOMES</p> <p>I can name the parts of the human body.</p> <p>I can observe the 4 seasons and compare the differences between Autumn and Winter.</p> <p>I can make observations of the weather.</p> <p>I understand how the weather changes within the seasons.</p> <p>VALUES Responsibility (equipment), excellence, quality, cooperation, determination</p>
<p>VOCABULARY <u>Core vocabulary</u></p> <p>Observation, Season, Autumn, Winter, instruments, weather, data, record, temperature, rainfall, rain gauge, sunrise, sunset, antonym, horizon</p> <p>Head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth, skeleton, skull, rib cage, arm bone, leg bone.</p> <p>Touch, Smell, Taste, Hear, See</p> <p><u>High level vocabulary</u></p> <p>Scientific enquiries, patterns relationships, data, compare and contrast</p>	<p>READING OPPORTUNITIES</p> <div style="display: flex; justify-content: space-around;">   </div> <p>Suggestions for Challenge</p> <p>Scientific names for body parts.</p> <p>Descriptions linking to English using senses – adjectives.</p> <p>Introducing data and ways to track data.</p> <p>Suggestions for AFL</p> <p>Links to forest school – assessing knowledge and vocabulary of the world around them.</p> <p>Assessment on insight every half term as well as lesson by lesson tracking.</p> <p>Peer assessment and self-assessment opportunities.</p>	<p>NEXT STEPS IN LEARNING</p> <p><u>Year 2</u></p> <ul style="list-style-type: none"> describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene <p><u>Year 3</u></p> <ul style="list-style-type: none"> identify that humans and some other animals have skeletons and muscles for support, protection and movement <p><u>Year 4</u></p> <ul style="list-style-type: none"> describe the simple functions of the basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions <p><u>Year 5</u></p> <ul style="list-style-type: none"> describe the changes as humans develop to old age <p><u>Year 6</u></p> <ul style="list-style-type: none"> recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
<p>SKILLS</p> <p>Working Scientifically is always at the forefront of science teaching with these key areas:</p> <ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways. Observing closely, using simple equipment Performing simple tests. Identifying and classifying. 	<p>SMSC</p> <p>Spiritual – learning about the world around them and reflecting on experiences.</p> <p>Social – cooperating and working together</p> <p>Moral – opportunities for voting.</p> <p>Cultural - Studying different scientists and their contributions.</p> <p>PREPARATION FOR ADULTHOOD</p> <p>Promote independence. Opportunities for leadership. Exposure to aspiring jobs in STEM field.</p>	<p>Key Questions</p> <p>How do we know it's Autumn?</p> <p>What is the difference between Autumn and Winter? What is the same?</p> <p>Why are our bodies special?</p> <p>What does the skeleton do?</p> <p>How can we stay healthy and strong?</p>

<ul style="list-style-type: none"> Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions. 			What are my senses and how do they work?
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Further NC Links to other subjects
 Life learning – Health and Wellbeing
 Maths – Measurement - measure and begin to record the following height, length. Compare and describe length and height.
 Forest school – seasons and different types of trees.

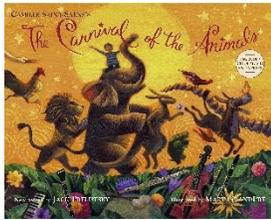
Curriculum Coherence – Year 1 Science



Term 2

Prior Learning/Starting Points – Seasonal Changes – Chn have discussed and described the changes in season from Autumn to Winter. Chn have learnt about the different senses used to identify seasonal changes. Chn have begun to classify and group according to a set of criteria and start to ask questions about a scientific process. ELG – Understanding the World – Shows care and concern for living things and the environment. Children can talk about some of the things they have observed such as plants, animals, natural and found objects and can comment and ask questions about aspects of their familiar world such as the place where they live or the natural world.

INTENT	IMPLEMENTATION	IMPACT
<p>KNOWLEDGE/ NC Objectives</p> <p>Distinguish between an object and the material from which it is made.</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</p> <p>Describe the simple physical properties of a variety of everyday materials.</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p> <p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</p>	<p>ACTIVITIES</p> <p>Observe and describe changes in the seasons and days from Winter to Spring.</p> <p>Investigating and exploring every day materials. Grouping according to properties of everyday materials.</p> <p>Investigating and categorising animals and discussing their similarities and differences. Why do they make great predators or vulnerable prey?</p> <p>Creating a fact file on one animal, to be added to throughout the term.</p> <p>STEM</p> <p>Floating and sinking with different materials – design, make and test. What is a fair test?</p> <p>Suggestions for challenge</p> <p>Higher level questioning with every day materials – man made/natural. How would we categorise a wooden spoon? Etc.</p> <p>Look into animals that aren't in the categories you might initially think – bats, whales.</p> <p>Suggestions for AFL</p> <p>Think-pair-share to assess children's prior learning.</p> <p>3-2-1 - 3) things they learned from your lesson; 2) things they want to know more about; and 1) question they have about animals.</p> <p>Assessment on insight every half term as well as lesson by lesson tracking.</p>	<p>OUTCOMES</p> <p>I can observe the 4 seasons and compare their differences.</p> <p>I can make observations of the weather.</p> <p>I understand how the weather changes within the seasons.</p> <p>I can name a variety of everyday materials</p> <p>I can describe the properties of materials.</p> <p>I can compare and categorise objects to their materials.</p> <p>I can name and identify common animals.</p> <p>I can describe and compare the structure of animals.</p> <p>I can categorise animals into their food groups.</p> <p>I can name a variety of wild flowers and trees.</p>

<p><u>VOCABULARY</u></p> <p>Observation, prediction, investigation, designing, testing, concluding.</p> <p>Wood, plastic, metal, water, glass and rock.</p> <p>Soft, hard, dull, shiny, rough, smooth, absorbent, waterproof, stiff, bendy, stretchy.</p> <p>Carnivore, herbivore, omnivore, reptile, bird, animal, habitat.</p> <p><u>Higher level vocabulary</u> Manipulate (in materials learning) Mammal, birds, reptiles, amphibian, fish</p>	<p><u>READING OPPORTUNITIES</u></p>  		
<p><u>NEXT STEPS IN LEARNING</u></p> <p><u>Year 2</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 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) <p><u>Year 3</u></p> <ul style="list-style-type: none"> identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat <p><u>Year 4</u></p> <ul style="list-style-type: none"> recognise some common conductors and insulators, and associate metals with being good conductors recognise that living things can be grouped in a variety of ways explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment recognise that environments can change and that this can sometimes pose dangers to living things <p><u>Year 5</u></p> <ul style="list-style-type: none"> describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird describe the life process of reproduction in some plants and animals describe the changes as humans develop to old age <p><u>Year 6</u></p> <ul style="list-style-type: none"> describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals 			
<p><u>SKILLS</u></p> <p>Working Scientifically is always at the forefront of science teaching with these key areas:</p> <ul style="list-style-type: none"> 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. 	<p><u>SMSC</u></p> <p>Spiritual – learning about the world around them and reflecting on experiences. Social – cooperating and working together Moral – opportunities for voting. Cultural - Studying different scientists and their contributions.</p>	<p><u>PREPARATION FOR ADULTHOOD</u></p> <p>Promote independence. Opportunities for leadership. Exposure to aspiring jobs in STEM field.</p>	<p><u>Key Questions</u></p> <p>What makes objects different?</p> <p>Why can some objects do things others can't?</p> <p>What makes a great predator?</p> <p>How does an animal's habitat help it survive?</p> <p>What makes humans different from animals?</p>

Further NC Links to other subjects

English – Spoken Language and Discussion/ non-fiction writing.
 Maths – Measurement/Compare and describe/Measure and begin to record.
 History – Changes in History- the changes in materials used for modes of transport.
 Forest school – Types of trees and their basic structure.

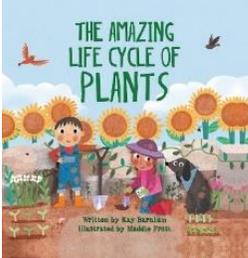
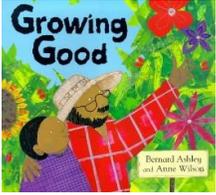
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Term 3

Prior Learning/Starting Points – From early learning goals - Developing an understanding of growth, decay and changes over time.

- Looks closely at similarities, differences, patterns and change.
- 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

INTENT	IMPLEMENTATION	IMPACT
<p>KNOWLEDGE/NC Objectives Observe changes across the 4 seasons (this is observed and revisited every half term). Observe and describe weather associated with the seasons and how day length varies.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees</p>	<p>ACTIVITIES</p> <p>Observe and describe changes in the seasons and days from Spring to Summer.</p> <p>The children will be planting their own plant (tomato plant) and watching it grow. This is an observational experiment and will require the children to observe their plants growing daily and keep their own diary to write down their findings.</p> <p>Take a photo of the plants they grow and label the different parts.</p> <p>Practical outdoor activities – finding evergreen and deciduous plants in their environments.</p> <p>STEM</p> <p>Plants investigation – observing and recording data.</p> <p>Take photo's during forest school sessions to record different types of trees/plants.</p>	<p>OUTCOMES</p> <p>I can observe the 4 seasons and compare their differences.</p> <p>I can make observations of the weather.</p> <p>I understand how the weather changes within the seasons.</p> <p>I can describe the structure of plants. (Growing their own tomato plant).</p>
<p>VOCABULARY</p> <p>Plant, observe, changes, findings, leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem.</p> <p><u>High level vocab</u> Names of different trees e.g. Willow, maple etc. Photosynthesis</p>	<p>READING OPPORTUNITIES</p> <div style="display: flex; justify-content: space-around;">   </div> <p>Suggestions for challenge</p> <p>Record height of plants growing project in a line graph. Discuss points where growth may have slowed/sped up.</p> <p>Looking into evergreen plants and how they stay green.</p>	<p>NEXT STEPS IN LEARNING</p> <p>Year 2</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>Year 3</p> <ul style="list-style-type: none"> • identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant • investigate the way in which water is transported within plants
<p>SKILLS</p> <p>Working Scientifically is always at the forefront of science teaching with these key areas:</p> <ul style="list-style-type: none"> • Asking simple questions and recognising that they can be answered in different ways. • Observing closely, using simple equipment 		

<ul style="list-style-type: none"> • 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. 	<p><u>Suggestions for AFL</u> Round Robin Posters – assessing prior learning or can be used at the end of a lesson. Groups of students each have a large piece of paper and some markers. The group records an answer to an open-ended question. Once the students finish their poster, they pass it on to the next group. Once every group has worked on every poster, the responses are discussed as a class.</p>	<ul style="list-style-type: none"> • explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal
	<p><u>SMSC</u> Spiritual – learning about the world around them and reflecting on experiences. Social – cooperating and working together Moral – opportunities for voting. Cultural - Studying different scientists and their contributions.</p>	<p><u>PREPARATION FOR ADULTHOOD</u> Promote independence. Opportunities for leadership. Exposure to aspiring jobs in STEM field.</p>
<p><u>LINKS</u> English – non-fiction, investigation into a plants growth. Forest school – exploring different trees and flowering plants.</p>		<p><u>Key Questions</u> How do plants go? Do all plants grow in the same way? Can plants grow all year round? Can all plants survive in the same Season/habitat?</p>