

Year 1

Science Programme of Study

Inc. Core-Standard Coverage of Enquiry Types and Scientific Skills:

Enquiry Types	
Research Using Secondary Sources	✓
Observing Over Time	✓✓✓
Pattern Seeking	✓
Identifying, Classifying and Grouping	✓✓✓✓
Comparative and Fair Testing	✓

Working Scientifically	
Conducting Secondary Research	✓✓
Asking Questions	
Making Predictions and Hypothesising	✓
Setting up Investigations	✓
Observing and Measuring	✓✓✓
Recording Data	✓✓✓
Interpreting and Communicating Results	
Evaluating and Questioning Further	

Unit	Prior Learning...	What I will learn now...	What I don't need to learn yet...
Seasonal Change	<p>Pupils should know about / be taught to:</p> <ul style="list-style-type: none"> Make observations of animals and plants and explain why some things occur, and talk about changes. (ELG) The features of their own immediate environment and how environments might vary from one another. (ELG) 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Observe changes across the four seasons (1-Seasonal Changes) Observe and describe weather associated with the seasons and how day length varies. (1-Seasonal Changes) 	<p>In Year 3 pupils will be taught to:</p> <ul style="list-style-type: none"> Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. (3-Light) <p>In Year 5 pupils will be taught to:</p> <ul style="list-style-type: none"> Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. (5-Earth and Space) <p>In Key Stage 3 pupils will be taught about:</p> <ul style="list-style-type: none"> The seasons and the Earth's tilt, day length at different times of year, in different hemispheres.
Everyday Materials	<p>Pupils should know about / be taught to:</p> <ul style="list-style-type: none"> Similarities and differences in relation to places, objects, materials and living things. (ELG) 	<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 (1-Everyday materials) Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock (1-Everyday materials) Describe the simple physical properties of a variety of everyday materials (1-Everyday materials) Compare and group together a variety of everyday materials on the basis of their simple physical properties (1-Everyday materials) 	<p>In Year 2 pupils will be taught to:</p> <ul style="list-style-type: none"> 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. (2-Animals including Humans) <p>In Year 6 pupils will be taught to:</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 (6-Living things and their Habitats) Give reasons for classifying plants and animals based on specific characteristics. (6-Living things and their Habitats)
Animals inc. Humans	<p>Pupils should know about / be taught to:</p> <ul style="list-style-type: none"> Similarities and differences in relation to places, objects, materials and living things. (ELG) The importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe (ELG) How to manage their own basic hygiene and personal needs successfully, including dressing and going to the toilet independently. (ELG) Make observations of animals and plants and explain why some things occur, and talk about changes. (ELG) 	<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, mammals and birds (1-Animals including Humans) Identify and name a variety of common animals that are carnivores, herbivores and omnivores (1-Animals including Humans) Describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles, and mammals, including pets) (1-Animals including Humans) Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (1-Animals including Humans) 	<p>In Year 2 pupils will be taught to:</p> <ul style="list-style-type: none"> 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. (Y2-Animals including Humans) <p>In Year 6 pupils will be taught to:</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 (6-Living things and their Habitats) Give reasons for classifying plants and animals based on specific characteristics. (6-Living things and their Habitats)
Plants	<p>Pupils should know about / be taught to:</p> <ul style="list-style-type: none"> Make observations of animals and plants and explain why some things occur, and talk about changes. (ELG) 	<p>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 (1-Plants) Identify and describe the basic structure of a variety of common flowering plants, including trees. (1-Plants) 	<p>In Year 2 pupils will be taught to:</p> <ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants (2-Plants) Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. (2-Plants)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Seasonal Changes	Everyday Materials	Seasonal Changes	Animals inc. Humans	Seasonal Changes	Animals inc. Humans
	<p>Observe changes across the four seasons.</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p> <p>Cross Curricular Links:</p> <p><i>Maths - Measure the amount of rainfall in each month using a scale and organise the data using a simple weather diary.</i></p> <p><i>Maths - Recognise and use language relating to dates, weeks, months and years (by ordering months, matching weather to seasons, etc.).</i></p> <p><i>Maths - Tell the time to the hour or half past by considering the number of / time of daylight hours, etc.</i></p> <p><i>DT - make a weather station that may be used to record / measure the weather across the year.</i></p> <p><i>Art - Sketch the appearance of a tree in each of the four seasons.</i></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 & group together a variety of everyday materials on the basis of their simple physical properties.</p> <p>Cross Curricular Links</p> <p><i>*Introduction to block graphs / pictograms - go on a treasure hunt, sort objects according to material, collect objects in a fixed time and transfer to class bar chart.</i></p> <p><i>* Count to and across 100, as well as in steps of 2, 5 and 10 by counting objects made of different materials.</i></p> <p><i>* Measure and begin to record by exploring the best combination of sand and water to build a sandcastle, etc.</i></p>	<p>Observe changes across the four seasons.</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p> <p>Cross Curricular Links:</p> <p><i>Maths - Measure the amount of rainfall in each month using a scale and organise the data using a simple weather diary.</i></p> <p><i>Maths - Recognise and use language relating to dates, weeks, months and years (by ordering months, matching weather to seasons, etc.).</i></p> <p><i>Maths - Tell the time to the hour or half past by considering the number of / time of daylight hours, etc.</i></p> <p><i>DT - make a weather station that may be used to record / measure the weather across the year.</i></p> <p><i>Art - Sketch the appearance of a tree in each of the four seasons.</i></p>	<p>Identify, name, draw & label the basic parts of the human body and say which part of the body is associated with each sense.</p> <p>Cross Curricular Links</p> <p><i>* Compare and describe lengths and heights of different animals.</i></p> <p><i>*Compare height to age or order by age (are older children taller? etc.).</i></p> <p><i>*Measure and record height, length (hand span, leg, foot span, etc. and order) and time (months and years to measure age, etc.).</i></p>	<p>Observe changes across the four seasons.</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p> <p>Cross Curricular Links:</p> <p><i>Maths - Measure the amount of rainfall in each month using a scale and organise the data using a simple weather diary.</i></p> <p><i>Maths - Recognise and use language relating to dates, weeks, months and years (by ordering months, matching weather to seasons, etc.).</i></p> <p><i>Maths - Tell the time to the hour or half past by considering the number of / time of daylight hours, etc.</i></p> <p><i>DT - make a weather station that may be used to record / measure the weather across the year.</i></p> <p><i>Art - Sketch the appearance of a tree in each of the four seasons.</i></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>Cross Curricular Links</p> <p><i>*Introduce a simple Carroll diagram (fur, no fur; swim, doesn't swim; etc.).</i></p> <p><i>* Compare and describe lengths and heights of different animals.</i></p> <p><i>* Compare, sort and group by number of legs, etc. using a Venn diagram.</i></p>
		Plants		Plants		Plants
	<p>Identify & name a variety of common wild & garden plants, including deciduous & evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Cross Curricular Links</p> <p><i>* Compare, sort and group by leaf shape, flower, size, etc. using a Venn diagram.</i></p> <p><i>* Compare and describe lengths and heights of different plants.</i></p> <p><i>* Order plants / leaves of different lengths.</i></p> <p><i>* Spot patterns by ordering – e.g. do plants with larger leaves grow to be taller?</i></p>	<p>Identify & name a variety of common wild & garden plants, including deciduous & evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Cross Curricular Links</p> <p><i>* Compare, sort and group by leaf shape, flower, size, etc. using a Venn diagram.</i></p> <p><i>* Compare and describe lengths and heights of different plants.</i></p> <p><i>* Order plants / leaves of different lengths.</i></p> <p><i>* Spot patterns by ordering – e.g. do plants with larger leaves grow to be taller?</i></p>	<p>Identify & name a variety of common wild & garden plants, including deciduous & evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Cross Curricular Links</p> <p><i>* Compare, sort and group by leaf shape, flower, size, etc. using a Venn diagram.</i></p> <p><i>* Compare and describe lengths and heights of different plants.</i></p> <p><i>* Order plants / leaves of different lengths.</i></p> <p><i>* Spot patterns by ordering – e.g. do plants with larger leaves grow to be taller?</i></p>	<p>Identify & name a variety of common wild & garden plants, including deciduous & evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Cross Curricular Links</p> <p><i>* Compare, sort and group by leaf shape, flower, size, etc. using a Venn diagram.</i></p> <p><i>* Compare and describe lengths and heights of different plants.</i></p> <p><i>* Order plants / leaves of different lengths.</i></p> <p><i>* Spot patterns by ordering – e.g. do plants with larger leaves grow to be taller?</i></p>	<p>Identify & name a variety of common wild & garden plants, including deciduous & evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Cross Curricular Links</p> <p><i>* Compare, sort and group by leaf shape, flower, size, etc. using a Venn diagram.</i></p> <p><i>* Compare and describe lengths and heights of different plants.</i></p> <p><i>* Order plants / leaves of different lengths.</i></p> <p><i>* Spot patterns by ordering – e.g. do plants with larger leaves grow to be taller?</i></p>	<p>Identify & name a variety of common wild & garden plants, including deciduous & evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Cross Curricular Links</p> <p><i>* Compare, sort and group by leaf shape, flower, size, etc. using a Venn diagram.</i></p> <p><i>* Compare and describe lengths and heights of different plants.</i></p> <p><i>* Order plants / leaves of different lengths.</i></p> <p><i>* Spot patterns by ordering – e.g. do plants with larger leaves grow to be taller?</i></p>

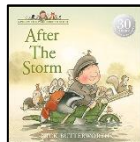
	Seasonal Changes	Everyday Materials	Animals inc. Humans	Plants
Year 1	<p>NC OBJ - Observe changes across the four seasons.</p> <p>Enquiry Type: <i>Observing Over Time</i> Working Scientifically Skill: <i>Recording Data</i></p> <p>Investigation Overview: <i>TAPS Focussed Assessment – The Colour of the Leaves</i> Children go on a 'welly walk' and observe / take photos of deciduous and evergreen trees, repeating this each month, plotting changes on a timeline and making comparison between different months of the year.</p>	<p>NC OBJ - Distinguish between an object and the material from which it is made.</p> <p>Enquiry Type: Working Scientifically Skill:</p> <p>Investigation Overview:</p>	<p>NC OBJ - Identify, name, draw & label the basic parts of the human body and say which part of the body is associated with each sense.</p> <p>Enquiry Type: <i>Identifying, Classifying and Grouping</i> Working Scientifically Skill: <i>Observing and Measuring</i></p> <p>Investigation Overview: <i>TAPS Focussed Assessment – Body Parts</i> Children create models of the human body (clay or playdough) and label the parts, describing which part of the body is associated with each sense.</p>	<p>NC OBJ - Identify & name a variety of common wild & garden plants, including deciduous & evergreen trees.</p> <p>Enquiry Type: Working Scientifically Skill:</p> <p>Investigation Overview:</p>
	<p>NC OBJ - Observe changes across the four seasons.</p> <p>Enquiry Type: <i>Research Using Sec. Sources</i> Working Scientifically Skill: <i>Conduct Sec. Research</i></p> <p>Investigation Overview: <i>ASE Plan Materials – Where do the Animals Go?</i> Children listen to a range of stories about animals that migrate or hibernate during winter. As a class, conduct secondary research to identify a range of animals that migrate or hibernate and children may then classify these accordingly.</p>	<p>NC OBJ - Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.</p> <p>Enquiry Type: Working Scientifically Skill:</p> <p>Investigation Overview:</p>	<p>NC OBJ - Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>Enquiry Type: <i>Identifying, Classifying and Grouping</i> Working Scientifically Skill: <i>Conducting Secondary Research</i></p> <p>Investigation Overview: <i>TAPS Focussed Assessment – Animal Classification</i> Children conduct sec. research and then classify a range of animals into animal groups (i.e. reptile, amphibian, mammal, etc.) as well as identifying carnivores, herbivores and omnivores.</p>	<p>NC OBJ - Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Enquiry Type: <i>Identifying, Classifying and Grouping</i> Working Scientifically Skill: <i>Observing and Measuring</i></p> <p>Investigation Overview: <i>TAPS Focussed Assessment – Parts of a Plant</i> Children dig up small plants (e.g. weeds, saplings etc.) and examine using magnifying glasses before being questioned about the different parts and changes as it grows, etc.</p>
	<p>NC OBJ - Observe and describe weather associated with the seasons and how day length varies.</p> <p>Enquiry Type: <i>Observing Over Time</i> Working Scientifically Skill: <i>Setting up an Investigation</i></p> <p>Investigation Overview: <i>TAPS Focussed Assessment – We Are Weather Watchers</i> Children make and install their own weather stations, enabling them to measure and record the rainfall and temperature in each month of the year.</p>	<p>NC OBJ - Describe the simple physical properties of a variety of everyday materials.</p> <p>Enquiry Type: <i>Pattern Seeking</i> Working Scientifically Skill: <i>Recording Data</i></p> <p>Investigation Overview: <i>TAPS Focussed Assessment – Can You See Yourself?</i> Children discuss how to test the reflectiveness of different objects (e.g. can you see yourself in it?) and then use their method to test and identify if some materials are more reflective than others.</p>	<p>NC OBJ - Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p> <p>Enquiry Type: Working Scientifically Skill:</p> <p>Investigation Overview:</p>	<p>NC OBJ - Identify & name a variety of common wild & garden plants, including deciduous & evergreen trees.</p> <p>Enquiry Type: Working Scientifically Skill:</p> <p>Investigation Overview:</p>
	<p>NC OBJ - Observe and describe weather associated with the seasons and how day length varies.</p> <p>Enquiry Type: <i>Observing Over Time</i> Working Scientifically Skill: <i>Recording Data</i></p> <p>Investigation Overview: <i>ASE Plan Materials – Barry Goes to Bed</i> Each weekend, one child takes 'Barry Bear' home with them and records what they do with him. They must put Barry Bear to bed when it goes dark and record what time they do this.</p>	<p>NC OBJ - Compare & group together a variety of everyday materials on the basis of their simple physical properties.</p> <p>Enquiry Type: <i>Comparative and Fair Testing</i> Working Scientifically Skill: <i>Predicting and Hypothesising</i></p> <p>Investigation Overview: <i>TAPS Focussed Assessment – Floating and Sinking</i> Children make predictions about whether an object will float or sink and record these predictions in a simple table. They then test their predictions and record the results in small groups.</p>	<p>NC OBJ - Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</p> <p>Enquiry Type: Working Scientifically Skill:</p> <p>Investigation Overview:</p>	<p>NC OBJ - Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Enquiry Type: <i>Identifying, Classifying and Grouping</i> Working Scientifically Skill: <i>Observing and Measuring</i></p> <p>Investigation Overview: <i>TAPS Focussed Assessment – Leaf Looking</i> Children collect a range of leaves and examine them closely using a magnifying glass. They then draw the different leaves and label them with support, if needed.</p>

Year 1 - Suggested Linked Texts (Reading Across the Curriculum)

Tree: Seasons Come, Seasons Go
(Patricia Hegarty and Britta Teckentrup)

A Little Bit of Winter
(Paul Stewart)

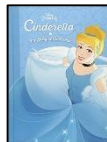
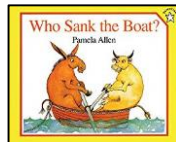
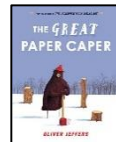
After the Storm
(Nick Butterworth)



The Great Paper Caper
(Oliver Jeffers)

Who Sank the Boat
(Pamela Allen)

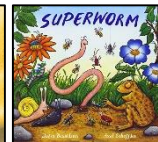
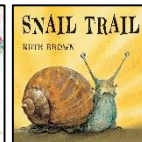
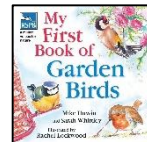
The Story of Cinderella
(Walt Disney)



RSPB: My First Book of Garden Birds
(Mike Unwin and Sarah Whittlely)

Snail Trail
(Ruth Brown)

Superworm
(Julia Donaldson & Axel Scheffler)



A Little Guide to Wild Flowers
(Charlotte Voake)

The Things That I LOVE about TREES
(Chris Butterworth)

Harry's Hazelnut
(Ruth Parsons)

