

**Year 2 - Plants**

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<b>National Curriculum Objectives</b>		<b>Sticky Knowledge</b>		<b>Vocabulary</b>										
<ul style="list-style-type: none"> <li>Observe and describe how seeds and bulbs grow into mature plants.</li> <li>Find out and describe how plants need water, light and warmth to grow and stay healthy.</li> </ul>		<ul style="list-style-type: none"> <li>Plants grow from seeds/bulbs</li> <li>Plants need light, water and warmth to grow and survive</li> <li>Flowers make seeds to make more plants (reproduce)</li> <li>Plants are important</li> <li>We need plants to survive (to clean air, to eat)</li> <li>We can eat different parts of the plants (leaves, stems, roots, seeds, fruit)</li> </ul>		Leaves, trunk, branch, root, seed, bulb, flower, stem, wild, garden, deciduous, evergreen, observe, grow, compare, record, temperature, predict, measure, diagram, germinate, warmth, sunlight.										
				<table border="1"> <thead> <tr> <th>Key Scientists</th> <th>Linked Texts</th> </tr> </thead> <tbody> <tr> <td>Agnes Arber (Botanist)</td> <td><i>The Tin Forest</i> (Helen Ward)</td> </tr> <tr> <td>Alan Titchmarsh (Botanist &amp; Gardener)</td> <td><i>Jack and the Beanstalk</i> (Richard Walker)</td> </tr> <tr> <td></td> <td><i>Ten Seeds</i> (Ruth Brown)</td> </tr> <tr> <td></td> <td><i>A Seed Is Sleepy</i> (Dianna Aston)</td> </tr> </tbody> </table>	Key Scientists	Linked Texts	Agnes Arber (Botanist)	<i>The Tin Forest</i> (Helen Ward)	Alan Titchmarsh (Botanist & Gardener)	<i>Jack and the Beanstalk</i> (Richard Walker)		<i>Ten Seeds</i> (Ruth Brown)		<i>A Seed Is Sleepy</i> (Dianna Aston)
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<b>Prior Learning</b>		<b>Common misconceptions</b>		<b>Future Learning</b>										
In Year 1 Children should: <ul style="list-style-type: none"> <li>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</li> <li>Identify and describe the basic structure of a variety of common flowering plants.</li> <li>Identify and name the roots, trunk, branches and leaves of trees.</li> </ul>		Some children may think: <ul style="list-style-type: none"> <li>Plants are not alive as they cannot be seen to move</li> <li>Seeds are not alive</li> <li>All plants start out as seeds</li> <li>Seeds and bulbs need sunlight to germinate.</li> </ul>		In Year 3 Children will: <ul style="list-style-type: none"> <li>Identify and describe the functions of different parts of the flowering plant: roots, stem/trunk/leaves and flowers</li> <li>Explore the part flowers play in a flowering plants life cycle, including: pollination, seed formation and seed dispersal</li> <li>Explain the requirements of plants for life and growth (air, light, water, nutrients from soil, room to grow) and how they vary between plants</li> <li>Know the way in which water is transported between plants</li> </ul>										
Teaching Ideas														
<b>Comparative tests</b>	<b>Identify &amp; Classify</b>	<b>Observation over time</b>	<b>Pattern Seeking</b>	<b>Research</b>										
Do cress seeds grow quicker inside or outside?	How can we identify the trees that we observed on our tree hunt?	What happens to my bean after I have planted it? <b>Measure heights of plants TAPS</b>	Do bigger seeds grow into bigger plants?	How does a cactus survive in a desert with no water?										

## Year 2 - Animals, including humans

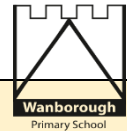
Year 2 - Animals, including humans					
National Curriculum Objectives		Sticky Knowledge		Vocabulary	
<ul style="list-style-type: none"> <li>Know that animals, including humans, have offspring which grow into adults ☐</li> <li>Know the basic stages in a life cycle for animals, including humans. ☐</li> <li>Find out and describe the basic needs of animals, including humans, for survival (water, food and air).</li> <li>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</li> </ul>		<ul style="list-style-type: none"> <li>Animals move in order to survive.</li> <li>Different animals move in different ways to help them survive.</li> <li>Exercise keeps animal's bodies in good condition and increases survival chances.</li> <li>All animals eventually die.</li> <li>Animals reproduce new animals when they reach maturity.</li> <li>Animals grow until maturity and then don't grow any larger.</li> </ul>		Living, dead, never alive, habitats, micro-habitats, food, food chain, leaf litter, shelter, sea shore, woodland, ocean, rainforest, conditions, desert, damp, shade,	
				Key Scientists	Linked Texts
				Steve Irwin (Crocodile Hunter)	<i>The Gruffalo</i> (Julia Donaldson)
Robert Winston (Human Scientist)	<i>Meerkat Mail</i> (Emily Gravett)				
Joe Wicks (Personal Trainer)	<i>Tadpole's Promise</i> (Jeanne Willis and Tony Ross)				
Prior Learning		Common misconceptions		Future Learning	
In Year 1 children should: ☐ <ul style="list-style-type: none"> <li>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. ☐</li> <li>Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</li> </ul>		Some children may think: <ul style="list-style-type: none"> <li>An animal's habitat is like its 'home'</li> <li>All animals that live in the sea are fish</li> <li>Respiration is breathing</li> <li>Breathing is respiration.</li> </ul>		In Year 3 children will: ☐ <ul style="list-style-type: none"> <li>Identify that animals, including humans, need the right types and amount of nutrition, and they cannot make their own food: they get their nutrition from what they eat. ☐</li> <li>Know how nutrients, water and oxygen are transported within animals and humans.</li> <li>Know about the importance of a nutritious, balanced diet. ☐</li> <li>Identify that humans and some other animals have skeletons and muscles for support, protection and movement:</li> </ul>	
Teaching Ideas					
Comparative tests	Identify & Classify	Observation over time	Pattern Seeking	Research	
Do amphibians have more in common with reptiles or fish? Do bananas make us run faster? Can you compare hand spans? TAPS	Which offspring belongs to which animal?  How would you group things to show which are living, dead, or have never been alive?	How does a tadpole change over time?  How much food and drink do I have over a week?	Which age group of children wash their hands the most in a day?	What food do you need in a healthy diet and why?  What do you need to do to look after a pet dog/cat/lizard and keep it healthy?	

## Year 2 – Living things and their habitats

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<b>National Curriculum Objectives</b>		<b>Sticky Knowledge</b>		<b>Vocabulary</b>
<ul style="list-style-type: none"> <li>Explore and compare the difference between things that are living, dead and things that have never been alive.</li> <li>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.</li> <li>Identify and name a variety of plants and animals in their habitats, including micro habitats.</li> <li>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name the different sources of food.</li> </ul>		<ul style="list-style-type: none"> <li>Some things are living, some were once living but now dead and some things never lived.</li> <li>There is variation between living things.</li> <li>Different animals and plants live in different places. Living things are adapted to survive in different habitats.</li> <li>Environmental change can affect plants and animals that live there.</li> </ul>		Living, dead, never alive, habitats, micro-habitats, food, food chain, leaf litter, shelter, sea shore, woodland, ocean, rainforest, conditions, desert, damp, shade,
				<b>Key Scientists</b>
				<b>Linked Texts</b>
				Terry Nutkins (TV Presenter)
				<i><b>The Gruffalo</b></i> (Julia Donaldson)
				Liz Bonnin (Conservationist)
				<i><b>Meerkat Mail</b></i> (Emily Gravett)
				<i><b>No Place Like Home</b></i> (Jonathon Emmett)
<b>Prior Learning</b>		<b>Common misconceptions</b>		<b>Future Learning</b>
In Early Years children should: <ul style="list-style-type: none"> <li>Comments and questions about the place they live or the natural world.</li> <li>Shows care and concern for living things and the environment.</li> <li>Can talk about things they have observed such as plants and animals.</li> <li>Notices features of objects in their environment.</li> <li>Comments and asks questions about their familiar world.</li> </ul>		Some children may think: <ul style="list-style-type: none"> <li>An animal's habitat is like its 'home'</li> <li>Plants and seeds are not alive as they cannot be seen to move</li> <li>Fire is living</li> <li>Arrows in a food chain mean 'eats'.</li> </ul>		In Year 4 children will: □ <ul style="list-style-type: none"> <li>Recognise that living things can be grouped in a variety of ways.</li> <li>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</li> <li>Know and label the features of a river</li> <li>Recognise that environments can change and that this can sometimes pose danger to living things.</li> </ul>
Teaching Ideas				
<b>Comparative tests</b>	<b>Identify &amp; Classify</b>	<b>Observation over time</b>	<b>Pattern Seeking</b>	<b>Research</b>
Which pets are the easiest to look after? Is there the same level of light in the evergreen wood compared with the deciduous wood?	How would you group these plants and animals based on what habitat you would find them in? Use spotter sheets to identify plants/animals. TAPS Identify where animals live. TAPS	How does the school pond change over the year?	What conditions do woodlice prefer to live in? TAPS  Which habitat do worms prefer - where can we find the most worms?	How are the animals in Africa different to the ones that we find in Britain? How does the habitat of the Arctic compare with the habitat of the rainforest? What ideas did botanist Arthur Tansley have about habitats in 1935?

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## Year 2 - Materials



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<b>National Curriculum Objectives</b>		<b>Sticky Knowledge</b>		<b>Vocabulary</b>		
<ul style="list-style-type: none"> <li>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</li> <li>Find out how shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> </ul>		<ul style="list-style-type: none"> <li>Materials can be changed by physical force (twisting, bending, squashing and stretching)</li> </ul>		Waterproof, fabric, rubber, cars, rock, paper, cardboard, wood, metal, plastic, glass, brick, twisting, squashing, bending, matches, cans, spoons,		
				<b>Key Scientists</b>		<b>Linked Texts</b>
				William Addis (Toothbrush Inventor)  Charles Mackintosh (Waterproof coat)  John MacAdam (roads)		<i><b>The Tin Forest</b></i> (Helen Ward)  <i><b>Traction Man</b></i> (Mini Grey)  <i><b>Three Little Pigs</b></i> (Lesley Sims)
<b>Prior Learning</b>		<b>Common misconceptions</b>		<b>Future Learning</b>		
In Year 1 children should: <ul style="list-style-type: none"> <li>Distinguish between an object and the material from which it is made.</li> <li>Identify and name a variety of everyday materials, including wood, metal, plastic, glass, water and rock,</li> <li>Describe the simple physical properties of a variety of everyday materials.</li> <li>Compare and group together a variety of everyday materials on the basis of their simple properties.</li> </ul>		Some children may think: <ul style="list-style-type: none"> <li>Only fabrics are materials</li> <li>Only building materials are materials</li> <li>Only writing materials are materials</li> <li>The word rock describes an object rather than a material</li> <li>Solid is another word for hard.</li> </ul>		In Year 3 children will: <ul style="list-style-type: none"> <li>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</li> <li>Describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> <li>Recognise that soils are made from rocks and organic matter.</li> </ul>		
<b>Teaching Ideas</b>						
<b>Comparative tests</b>	<b>Identify &amp; Classify</b>	<b>Observation over time</b>	<b>Pattern Seeking</b>	<b>Research</b>		
Which shapes make the strongest paper bridge? Which material would be best for the roof of the little pig's house? Test materials for a rocket mouse TAPS Compare how waterproof materials are. TAPS	Which materials will float and which will sink?  Which materials will let electricity go through them, and which will not?  Which materials are shiny and which are dull?	How long do bubble bath bubbles last for?  What will happen to our snowman?	How do materials change with heat? <i>leave outside in sunshine/windowsill/radiator</i>  How does amount of water affect the strength of a kitchen towel?	How have the materials we use changed over time?  How are plastics made?		