

Year 2 – Plants

National Curriculum Objectives	Sticky Knowledge	Vocabulary	
<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 warmth to grow and stay healthy. 	<ul style="list-style-type: none"> ● Plants grow from seeds/bulbs ● Plants need light, water and warmth to grow and survive ● Flowers make seeds to make more plants (reproduce) ● Plants are important ● We need plants to survive (to clean air, to eat) ● We can eat different parts of the plants (leaves, stems, roots, seeds, fruit) 	Leaves, trunk, branch, root, seed, bulb, flower, stem, wild, garden, deciduous, evergreen, observe, grow, compare, record, temperature, predict, measure, diagram, germinate, warmth, sunlight.	
		Key Scientists	Linked Texts
		Agnes Arber (Botanist) Alan Titchmarsh (Botanist & Gardener)	<i>The Tin Forest</i> (Helen Ward) <i>Jack and the Beanstalk</i> (Richard Walker) <i>Ten Seeds</i> (Ruth Brown) A Seed Is Sleepy (Dianna Aston)
Prior Learning	Key Question(s):	Future Learning	
In Year 1 Children should: <ul style="list-style-type: none"> ● Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. ● Identify and describe the basic structure of a variety of common flowering plants. 	<ul style="list-style-type: none"> ● Do cress produce seeds, how could we find out? ● Do all plants produce flowers and seeds? ● What is different between freshly cut and planted flowers? ● Do plants flower all year round? ● What are flowers for? 	In Year 3 Children will: <ul style="list-style-type: none"> ● Identify and describe the functions of different parts of the flowering plant: roots, stem/trunk/leaves and flowers ● Explore the part flowers play in a flowering plants life cycle, including: pollination, seed formation and seed dispersal 	

<ul style="list-style-type: none"> Identify and name the roots, trunk, branches and leaves of trees. 	<ul style="list-style-type: none"> What happens to a plant after it has produced seeds? 	<ul style="list-style-type: none"> Explain the requirements of plants for life and growth (air, light, water, nutrients from soil, room to grow) and how they vary between plants Know the way in which water is transported between plants.
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Teaching Ideas

<u>Comparative tests</u>	<u>Identify & Classify</u>	<u>Observation over time</u>	<u>Pattern Seeking</u>	<u>Research</u>	<u>BIG Question – Assessment Opportunity</u>
<p>Do cress seeds grow quicker inside or outside?</p>	<p>How can we identify the trees that we observed on our tree hunt?</p>	<p>What happens to my bean after I have planted it?</p>	<p>Do bigger seeds grow into bigger plants?</p>	<p>How does a cactus survive in a desert with no water?</p>	<p>What should I do to grow a healthy plant?</p>

Year 2 – Animals, including Humans

National Curriculum Objectives	Sticky Knowledge	Vocabulary	
<ul style="list-style-type: none"> ● Know that animals, including humans, have offspring which grow into adults ● Know the basic stages in a life cycle for animals, including humans. ● Find out and describe the basic needs of animals, including humans, for survival (water, food and air). ● Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. 	<ul style="list-style-type: none"> ● Animals move in order to survive. ● Different animals move in different ways to help them survive. ● Exercise keeps animal's bodies in good condition and increases survival chances. ● All animals eventually die. ● Animals reproduce new animals when they reach maturity. ● Animals grow until maturity and then don't grow any larger. 	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	Key Question(s):	Future Learning	
In Year 1 children should: <ul style="list-style-type: none"> ● Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. ● Identify and name a variety of common animals that are carnivores, herbivores and omnivores. 	<ul style="list-style-type: none"> ● How long do should my pets live for? ● Do all animals grow and live the same way? ● Do bigger animals live longer? ● Why are we all different heights? ● How and why do we grow and change? 	In Year 3 children will: <ul style="list-style-type: none"> ● 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. ● Know how nutrients, water and oxygen are transported within animals and humans. ● Know about the importance of a nutritious, balanced diet. ● Identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	

Teaching Ideas

<u>Comparative tests</u>	<u>Identify & Classify</u>	<u>Observation over time</u>	<u>Pattern Seeking</u>	<u>Research</u>	<u>BIG Question – Assessment Opportunity</u>
<p>Do amphibians have more in common with reptiles or fish?</p> <p>Do bananas make us run faster?</p>	<p>Which offspring belongs to which animal?</p> <p>How would you group things to show which are living, dead, or have never been alive?</p>	<p>How does a tadpole change over time?</p> <p>How much food and drink do I have over a week?</p>	<p>Which age group of children wash their hands the most in a day?</p>	<p>What food do you need in a healthy diet and why?</p> <p>What do you need to do to look after a pet dog/cat/lizard and keep it healthy?</p>	<p>Do living things change or stay the same?</p>

Year 2 – Living Things & their Habitats

National Curriculum Objectives	Sticky Knowledge	Vocabulary	
<ul style="list-style-type: none"> Explore and compare the difference between things that are living, dead and things that have never been alive. 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. Identify and name a variety of plants and animals in their habitats, including micro habitats. 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. 	<ul style="list-style-type: none"> Some things are living, some were once living but now dead and some things never lived. There is variation between living things. Different animals and plants live in different places. Living things are adapted to survive in different habitats. Environmental change can affect plants and animals that live there. 	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
		Terry Nutkins (TV Presenter) Liz Bonnin (Conservationist)	<i>The Gruffalo</i> (Julia Donaldson) <i>Meerkat Mail</i> (Emily Gravett) <i>No Place Like Home</i> (Jonathon Emmett)
Prior Learning	Key Question(s)	Future Learning	
In Early Years children should: <ul style="list-style-type: none"> Comments and questions about the place they live or the natural world. Shows care and concern for living things and the environment. Can talk about things they have observed such as plants and animals. 	<ul style="list-style-type: none"> How to animals eat? Do all animals eat the same thing? Which animals hunt, and which animals are hunted? Why? What animals live in our school environment? 	In Year 4 children will: <ul style="list-style-type: none"> 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. Know and label the features of a river 	

- Notices features of objects in their environment.
- Comments and asks questions about their familiar world.

- How are animals and plants 'adapted' to live in their habitats
- Why do animals and plants like to live in different places?
- How do seasons affect our animals and plants?
- Which animals hibernate and why?
- Why do snails hibernate, but slugs don't?
- How do habitats change over our school year?

- Recognise that environments can change and that this can sometimes pose danger to living things.

Teaching Ideas

<u>Comparative tests</u>	<u>Identify & Classify</u>	<u>Observation over time</u>	<u>Pattern Seeking</u>	<u>Research</u>	<u>BIG Question – Assessment Opportunity</u>
<p>Which pets are the easiest to look after?</p> <p>Is there the same level of light in the evergreen wood compared with the deciduous wood?</p>	<p>How would you group these plants and animals based on what habitat you would find them in?</p>	<p>How does the school pond change over the year?</p>	<p>What conditions do woodlice prefer to live in?</p> <p>Which habitat do worms prefer – where can we find the most worms?</p>	<p>How are the animals in Australia different to the ones that we find in Britain?</p> <p>How does the habitat of the Arctic compare with the habitat of the rainforest?</p>	<p>Why do different animals live in different places?</p>

Year 2 – Materials

National Curriculum Objectives	Sticky Knowledge	Vocabulary	
<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 shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 	<ul style="list-style-type: none"> Materials can be changed by physical force (twisting, bending, squashing and stretching) 	Waterproof, fabric, rubber, cars, rock, paper, cardboard, wood, metal, plastic, glass, brick, twisting, squashing, bending, matches, cans, spoons,	
		Key Scientists	Linked Texts
		William Addis (Toothbrush Inventor)	<i>The Tin Forest</i> (Helen Ward)
		Charles Mackintosh (Waterproof coat)	<i>Traction Man</i> (Mini Grey)
		John MacAdam (roads)	<i>Three Little Pigs</i> (Lesley Sims)
Prior Learning	Key Question(s):	Future Learning	
In Year 1 children should: <ul style="list-style-type: none"> Distinguish between and object and the material from which it is made. 	It is recommended that materials be taught three times through KSI. Give a theme for each topic e.g. buildings, exploration, toys, the seaside. Plan to investigate a couple of classes of materials and properties in each topic so	In Year 3 children will: <ul style="list-style-type: none"> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Describe in simple terms how fossils are formed when things that have lived are trapped within rock 	

- Identify and name a variety of everyday materials, including wood, metal, plastic, glass, water and rock,
- Describe the simple physical properties of a variety of everyday materials.
- Compare and group together a variety of everyday materials on the basis of their simple properties.

children get a depth of experience each topic and cover all the classes of materials over the key stage

Buildings

- Which rocks are the least crumbly?
- Which materials absorb the most water?
- Which type of brick would be the easiest to drag to make a pyramid?
- Which material would be the strongest to use as a floor tile?

Toys & Nice things

- Which fabric would make the softest blanket?
- The baby has spilt her drink, which material would absorb the drink the best?
- We want to make a really slippery slide, which liquid would be best to use?
- Which chocolate will melt the fastest on a warm plate (a model of a warm hand)
- Which wrapping papers are strong enough to wrap and send a present?

Clothing & Materials

- Which material could be used to make a waterproof hat for the teacher when she is on the playground at playtime?
- Which plastic would be flexible enough to make a belt?

- Recognise that soils are made from rocks and organic matter.

- Which material could I wrap my ice egg / snowman in to stop it melting, or would it make it melt quicker?
- What could I wrap a chicken egg in to keep it warm when it is waiting to hatch?
- What could you paint on the runaway gingerbread man that would allow him to swim the river and get away from the fox and not turn to mush?

Teaching Ideas

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<p>Which shapes make the strongest paper bridge?</p> <p>Which material would be best for the roof of the little pig's house?</p>	<p>Which materials will float and which will sink?</p> <p>Which materials will let electricity go through them, and which will not?</p> <p>Which materials are shiny and which are dull?</p>	<p>How long do bubble bath bubbles last for?</p> <p>What will happen to our snowman?</p>	<p>How do materials change with heat? <i>leave outside in sunshine/windowsill/radiator</i></p> <p>How does amount of water affect the strength of a kitchen towel?</p>	<p>How have the materials we use changed over time?</p> <p>How are plastics made?</p> <p>Are there different types of plastics? What are the different uses for them?</p>	<p>Can we change materials?</p> <p>How do we choose the best material?</p>