

Year 2 Science Curriculum

Topics

1. Living Things
2. Plants
3. Animals Inc. Humans
4. Materials

Key

Observing over time

Identifying and classifying

Pattern seeking

Research from a secondary source

Fair testing

Cross curricular

Websites

Explorify – www.explorify.wellcome.ac.uk

TigTag – www.tigtagworld.co.uk

Y2 Living things and their habitat

1. explore and compare the differences between things that are living, dead, and things that have never been alive
2. 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
3. identify and name a variety of plants and animals in their habitats, including micro-habitats
4. 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

	Assessment guidance	Key learning	Possible 'I can' statements
SECURE	Shows understanding of a concept using scientific vocabulary correctly	<ul style="list-style-type: none"> • All objects are either living, dead or have never been alive. • Living things are plants (including seeds) and animals. Dead things include dead animals and plants and parts of plants and animals that are no longer attached e.g. leaves and twigs, shells, fur, hair and feathers. An object made of wood is classed as dead. Objects made of rock, metal and plastic have never been alive. • Animals and plants live in a habitat to which they are suited which means that animals have suitable features that help them move and find food and plants have suitable features that help them to grow well. The habitat provides the basic needs of the animals and plants – shelter, food and water. Within a habitat there are different micro-habitats e.g. in a woodland – in the leaf litter, on the bark of trees, on the leaves. These micro-habitats have different conditions. These conditions affect what plants and animals live there. • The plants and animals in a habitat depend on each other for food and shelter etc. The way that animals obtain their food from plants and other animals can be shown in a food chain. <p>Key vocabulary: Living, dead, never been alive, suited, suitable, basic needs, food chain, shelter, feed, names of local habitats</p>	<p>I can find a range of items outside that are living, dead and never lived</p> <p>I can name a range of animals and plants that live in a habitat and micro-habitats that they have studied</p> <p>I can talk about how the features of these animals and plants make them suitable to the habitat</p> <p>I can talk about what the animals eat in a habitat and how the plants provide shelter for them</p> <p>I can construct a food chain that starts with a plant and has the arrows pointing in the correct direction</p>
	Applying knowledge in familiar related contexts, including a range of enquiries	<ul style="list-style-type: none"> • Explore the outside environment regularly to find objects that are living, dead and have never lived • Classify objects found in the local environment • Observe animals and plants carefully, drawing and labelling diagrams • Create simple food chains for a familiar local habitat from first hand observation and research • Create simple food chains from information given e.g. in picture books (Gruffalo etc.) <p>I can create a bar chart showing which animals are the most popular in our school grounds.</p>	<p>I can sort different things into living, dead and never lived.</p> <p>I can give key features that mean the animal or plant is suited to its micro-habitat.</p> <p>I can observe how habitats change in different seasons.</p> <p>I can find out where certain animals live using the internet/book</p> <p>I can create an informative text based around our local environment.</p> <p>I can list the animals in our local environment in alphabetical order.</p>

Y2 Plants

1. observe and describe how seeds and bulbs grow into mature plants
2. find out and describe how plants need water, light and a suitable temperature to grow and stay healthy

	Assessment guidance	Key learning	Possible 'I can' statements
SECURE	Shows understanding of a concept using scientific vocabulary correctly	<ul style="list-style-type: none"> Plants may grow from either seeds or bulbs. These then germinate and grow into seedlings which then continue to grow into mature plants. These mature plants may have flowers which then develop into seeds, berries, fruits etc. Seeds and bulbs need to be planted outside at particular times of the year and they will germinate and grow at different rates. Some plants are better suited to growing in full sun and some grow better in partial or full shade. Plants also need different amounts of water and space to grow well and stay healthy. <p>Key vocabulary The same as year 1 plus - light, shade, sun, warm, cool, water, grow, healthy</p>	<p>I can describe how plants that have grown from seeds and bulbs have developed over time</p> <p>I can identify plants that grew well in different conditions</p>
	Applying knowledge in familiar related contexts, including a range of enquiries	<ul style="list-style-type: none"> Make close observations of seeds and bulbs Classify seeds and bulbs Research and plan when and how to plant a range of seeds and bulbs Look after the plants as they grow – weeding, thinning, watering etc. Make close observations and measurements of their plants growing from seeds and bulbs Make comparisons between plants as they grow 	<p>I can spot similarities and difference between bulbs and seeds</p> <p>I can nurture seeds and bulbs into mature plants identifying the different requirements of different plants</p> <p>I can observe the change in a plant over time.</p> <p>I can discover where most plants grow/don't grow.</p> <p>I can record in pictures how a plant grows.</p> <p>I can create an observational drawing of a plant</p>

Y2 Animals including humans

1. notice that animals, including humans, have offspring which grow into adults
2. find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
3. describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene

	Assessment guidance	Key learning	Possible 'I can' statements
SECURE	Shows understanding of a concept using scientific vocabulary correctly	<ul style="list-style-type: none"> • Animals including humans have offspring which grow into adults. In humans and some animals these offspring will be young, such as babies or kittens, that grow into adults. In other animals, such as chickens or insects, there may be eggs laid that hatch to young or other stages which then grow to adults. The young of some animals do not look like their parents e.g. tadpoles. • All animals including humans have basic needs of feeding, drinking and breathing that must be satisfied in order to survive, and to grow into healthy adults. • Humans also need the right amounts and types of food and exercise. Good hygiene is also important in preventing infections and illnesses. <p>Key vocabulary: Offspring, reproduction, growth, child, young/old stages (examples - chick/hen, baby/child/adult, caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease, food types (examples – meat, fish, vegetables, bread, rice, pasta)</p>	<p>I can describe how animals including humans have offspring which grow into adults, using the appropriate names for the stages.</p> <p>I can state the basic needs of animals, including humans, for survival.</p> <p>I can state the importance for humans of exercise, eating the right amounts of different types of food and hygiene.</p> <p>I can name foods in each section of the Eatwell guide.</p> <p>I can describe the life cycle of some animals and their growth to adults.</p>
	Applying knowledge in familiar related contexts, including a range of enquiries	<ul style="list-style-type: none"> • Ask people questions and use secondary sources to find out about the life cycles of some animals • Observe animals growing over a period of time e.g. chicks, caterpillars, a baby • Ask questions of a parent about how they look after their baby • Ask pet owners questions about how they look after their pet • Explore the effect of exercise on their bodies • Investigate washing hands, using glitter gel 	<p>I can measure/observe how animals grow over a period of time.</p> <p>I can classify food in a range of ways, including using the Eatwell guide.</p> <p>I can explain how development and health might be affected by differing conditions and needs being met/not met.</p> <p>I can create a care guide for my pet explaining what they need to be healthy and grow.</p> <p>I can create an exercise video.</p> <p>I can cook a healthy meal.</p>

Y2 Uses of everyday materials

1. identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
2. find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

	Assessment guidance	Key learning	Possible 'I can' statements
SECURE	Shows understanding of a concept using scientific vocabulary correctly	<ul style="list-style-type: none"> All objects are made of one or more materials that are chosen specifically because they have suitable properties for the task. When choosing what to make an object from, the properties needed are compared with the properties of the possible materials, identified through simple tests and classifying activities. A material can be suitable for different purposes and an object can be made of different materials. Objects made of some materials can be changed in shape by bending, stretching, squashing and twisting. This can be a property of the material or depend on how the material has been processed e.g. thickness. <p>Key vocabulary Names of materials – increased range from year 1 Properties of materials - as for year 1 plus opaque, transparent and translucent, reflective, non-reflective, flexible, rigid</p>	<p>I can name an object, say what material it is made from, identify its properties and make a link between the properties and a particular use</p> <p>I can label a picture or diagram of an object made from different materials</p> <p>For a given object can identify what properties a suitable material needs to have</p> <p>I can use the words flexible and/or stretchy to describe materials that can be changed in shape and stiff and/or rigid for those that cannot</p> <p>I can recognise that a material may come in different forms which have different properties</p> <p>Key vocabulary (cont...) Shape, push/pushing, pull/puling, twist/twisting, squash/squashing. Bend/bending, stretch/stretching</p>
	Applying knowledge in familiar related contexts, including a range of enquiries	<ul style="list-style-type: none"> Classify materials Make suggestions about alternative materials for a purpose that are both suitable and unsuitable 	<p>I can sort materials using a range of properties</p> <p>I can explain using the key properties why a material is suitable or not suitable for a purpose</p> <p>I can begin to choose an appropriate method for testing a material for a particular property</p> <p>I can use test evidence to select appropriate material for a purpose e.g. Which material is the best for a rain hat?</p> <p>I can design a costume for Elastigirl (The Incredibles) thinking about what properties the material will need.</p> <p>I can create a Venn diagram showing similarities and differences of materials.</p>

