

Y2	Autumn 1 and Autumn 2	Spring 1	Spring 2 and Summer 1 (SATs)	Summer 2
Topic	EVERYDAY MATERIALS USES OF EVERYDAY MATERIALS	LIVING THINGS AND HABITATS	PLANTS	ANIMALS INCLUDING HUMANS
All Year	Observing Living things and their habitats, Plants (ex. growing seeds and bulbs outside)			
NC LINKS	<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. 	<ul style="list-style-type: none"> Explore and compare the differences 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 different sources of food 	<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. 	<ul style="list-style-type: none"> 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). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.
Prior Learning	<ul style="list-style-type: none"> Distinguish between an object and the material from which it is made. (Y1 - Everyday materials) Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 - Everyday materials) Describe the simple physical properties of a variety of everyday materials. (Y1 - Everyday materials) Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 - Everyday materials) 	<ul style="list-style-type: none"> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. (Y1 - Plants) Identify and describe the basic structure of a variety of common flowering plants, including trees. (Y1 - Plants) Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 - Animals including humans) Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 - Animals including humans) Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (Y1 – Animals, including humans) Observe changes across the four seasons. (Y1 -Seasonal changes) 	<ul style="list-style-type: none"> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. (Y1 - Plants) Identify and describe the basic structure of a variety of common flowering plants, including trees. (Y1 - Plants) 	<ul style="list-style-type: none"> Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 - 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. (Y1 - Animals, including humans)
Future Learning	<ul style="list-style-type: none"> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. (Y3 - Rocks) Notice that some forces need contact between two objects, but magnetic forces can act at a distance. (Y3 - Forces and magnets) Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. (Y5 - Properties and changes of materials) Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. (Y5 - Properties and changes of materials) 	<ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways. (Y4 - Living things and their habitats) Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. (Y4 - Living things and their habitats) Recognise that environments can change and that this can sometimes pose dangers to living things. (Y4 - Living things and their habitats) Construct and interpret a variety of food chains, identifying producers, predators and prey. (Y4 - Animals, including humans) 	<ul style="list-style-type: none"> Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. (Y3 - Plants) 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. (Y3 - Plants) Investigate the way in which water is transported within plants. (Y3 - Plants) Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Y3 - Plants) 	<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. (Y3 - Animals, including humans) Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Y5 - Living things and their habitats) Describe the life process of reproduction in some plants and animals. (Y5 - Living things and their habitats) Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. (Y6 - Animals, including humans)
Key Questions	can you remember in Year 1 looking at materials - rough and smooth etc recall which are waterproof and which aren't? What is making the material change shape?	Can polar bears survive without ice? test the melting of ice as experiment	What do plants need to grow? Can you predict which seed will grow the best? Why?	How do animals depend on each other?
Key Learning	All objects are made of one or more materials that are chosen specifically because they have suitable properties for the task. For example, a water bottle is made of plastic because it is transparent allowing you to see the drink inside and waterproof so that it holds the water. 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. For example, clay can be shaped by squashing, stretching, rolling, pressing etc. This can be a property of the material or depend on how the material has been processed e.g. thickness.	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 (This is a simplification, but appropriate for Year 2 children.) An object made of wood is classed as dead. Objects made of rock, metal and plastic have never been alive (again ignoring that plastics are made of fossil fuels). 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 e.g. light or dark, damp or dry. These conditions affect which 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.	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 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.	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 the basic needs of feeding, drinking and breathing that must be satisfied in order to survive. To grow into healthy adults, they also need the right amounts and types of food and exercise. Good hygiene is also important in preventing infections and illnesses

Possible evidence	<ul style="list-style-type: none"> 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 Can label a picture or diagram of an object made from different materials For a given object can identify what properties a suitable material needs to have Whilst changing the shape of an object can describe the action used 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 Can recognise that a material may come in different forms which have different properties 	<ul style="list-style-type: none"> Can find a range of items outside that are living, dead and never lived Can name a range of animals and plants that live in a habitat and micro-habitats that they have studied Can talk about how the features of these animals and plants make them suitable to the habitat Can talk about what the animals eat in a habitat and how the plants provide shelter for them Can construct a food chain that starts with a plant and has the arrows pointing in the correct direction 	<p>Can describe how plants that they have grown from seeds and bulbs have developed over time</p> <p>Can identify plants that grew well in different conditions</p>	<p>Can describe how animals, including humans, have offspring which grow into adults, using the appropriate names for the stages</p> <ul style="list-style-type: none"> Can state the basic needs of animals, including humans, for survival Can state the importance for humans of exercise, eating the right amounts of different types of food, and hygiene Can name foods in each section of the Eatwell Guide
Key Scientists	See Scientists across the curriculum for information on historical figures, under-represented groups and modern scientists relating to each science topic.			
Key Vocab	Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard Properties of materials – as for Year 1 plus opaque, transparent and translucent, reflective, nonreflective, flexible, rigid Shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching	Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed • Names of local habitats e.g. pond, woodland etc. • Names of micro-habitats e.g. under logs, in bushes etc.	As for Year 1 plus light, shade, sun, warm, cool, water, grow, healthy	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)
Common Misconceptions	Some children may think: <ul style="list-style-type: none"> only fabrics are materials only building materials are materials only writing materials are materials the word rock describes an object rather than a material solid is another word for hard. 	Some children may think: <ul style="list-style-type: none"> an animal's habitat is like its 'home' plants and seeds are not alive as they cannot be seen to move fire is living arrows in a food chain mean 'eats'. 	Some children may think: <ul style="list-style-type: none"> plants are not alive as they cannot be seen to move seeds are not alive all plants start out as seeds seeds and bulbs need sunlight to germinate. 	Some children may think: <ul style="list-style-type: none"> an animal's habitat is like its 'home' all animals that live in the sea are fish respiration is breathing breathing is respiration.
Key Challenge	See Challenging more able pupils document			
Yr 2 Support	See Universal Offer document			
Visit or Visitor				Dental Nurse
Key text	The Great Fire of London - literacy linked The Three Wolves and the Big Bad Pig	Frozen story A Planet Full of Plastic	non fiction plant and habitat texts Jim and the Beanstalk Olivers Vegetables The Enchanted Wood	The Clue is in the Poo Growing Frogs
Resources	Explorify Website STEM Website for all topics	Explorify Website STEM Website for all topics	Seeds, potatoes Explorify Website STEM Website for all topics	Explorify Website STEM Website for all topics Floating garden challenge Pumpkins against poverty Sandy seeds (Upd8) Life below water SCARF

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Also see [Practical Work Supporting Scientific Enquiry](#), [Outdoor Learning in the National Curriculum](#), [Science Making Links to the Foundation Subjects](#),