



Science - Year 2 - Medium Term Plan
Autumn 1: Plant growth

Investigating seeds, bulbs and plants and recognising the conditions required for germination and healthy plant growth

Lesson	Learning Objective	Success Criteria	National Curriculum Links	Vocabulary	Resources
One: What do seeds need to grow?	<ul style="list-style-type: none"> To recognise that seeds need certain conditions for growth. <p>Working scientifically</p> <ul style="list-style-type: none"> To plan comparative tests. 	<ul style="list-style-type: none"> I can suggest conditions that help seeds grow. <p>Working scientifically</p> <ul style="list-style-type: none"> I can suggest what should change when planning a comparative test. I can plan what to observe and measure. 	<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. <p>Working scientifically Pupils should be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways. Observing closely, using simple equipment. Performing simple tests. 	<ul style="list-style-type: none"> comparative test conclusion condition growth measure observe seed shoot 	<ul style="list-style-type: none"> Equipment for planting seeds: <ul style="list-style-type: none"> small plant pots or cups (one each); sweet pea seeds (one each); a bag of compost (one for the class); plastic pipettes (one per table); bowls of water (one per table); spoons (one per table). Flipchart (one for the teacher s see Wrapping up). Sticky notes
Two: Seeds and bulbs	<ul style="list-style-type: none"> To recognise that seeds and bulbs contain what they need to grow into a plant. <p>Working scientifically</p> <ul style="list-style-type: none"> To measure with a ruler. 	<ul style="list-style-type: none"> I can recall that seeds have an energy store inside. I can recall that a seed needs suitable conditions to grow. <p>Working scientifically</p> <ul style="list-style-type: none"> I can measure the height of a shoot in centimetres. 	<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. <p>Working scientifically Pupils should be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways. Observing closely, using simple equipment. Performing simple tests. Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions. 	<ul style="list-style-type: none"> bulb energy growth leaf measure nutrient observe plant seed seed coat shoot stem 	<ul style="list-style-type: none"> Daffodil bulbs cut in half (half a bulb per pair). Magnifying glasses (one per pair). Seeds, such as sunflower seeds (for the teacher demonstration s see Main event). The children's plants from Lesson 1: What do seeds need to grow? (one each). Rulers (one each). Base ten (ten sticks s optional, see Adaptive teaching). Devices to record video or audio

<p>Three: Germination</p>	<ul style="list-style-type: none"> To describe what seeds need to germinate. <p>Working scientifically</p> <ul style="list-style-type: none"> To record data in a table. 	<ul style="list-style-type: none"> I can recall that seeds need water and warmth to germinate. <p>Working scientifically</p> <ul style="list-style-type: none"> I can record plant growth data in a table. I can compare plant growth in different test conditions. 	<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. <p>Working scientifically</p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways. Observing closely, using simple equipment. Performing simple tests. Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions. 	<ul style="list-style-type: none"> comparative test conclusion condition germinate growth measure observe seed shoot stem 	<ul style="list-style-type: none"> Plants A, B and C from Lesson 1: What do seeds need to grow? One of the pupil's plants from Lesson 1: What do seeds need to grow? Whiteboards and pens (one between two). 3 tea towels (to cover plants A, B and C). 4 rulers. Base ten (ten sticks s. optional, see Adaptive teaching).
<p>Four: Light and plant growth</p>	<ul style="list-style-type: none"> To describe the effect of light on plant growth. <p>Working scientifically</p> <ul style="list-style-type: none"> To observe using a magnifying glass. 	<ul style="list-style-type: none"> I can recall that plants need light for healthy growth. <p>Working scientifically</p> <ul style="list-style-type: none"> I can use a magnifying glass to observe and compare plant growth. I can record plant growth data over time. 	<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. <p>Working scientifically</p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> Observing closely, using simple equipment. Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions. 	<ul style="list-style-type: none"> growth seed condition shoot measure observe stem leaf wilt roots germinate energy 	<ul style="list-style-type: none"> Plant B (grown in the dark) from Lesson 1: What do seeds need to grow? An outdoor space with access to plants (optional s. see Attention grabber). 1 tea towel (to cover plant B). Equipment for the plant diary task: <ul style="list-style-type: none"> magnifying glasses (one between two); rulers (one between two); the pupil's plants from Lesson 1: What do seeds need to grow? (one each); the pupil's plant diaries from Lesson 2: Seeds and bulbs (one each). A pupil's completed results table (see <i>Activity: Results table</i> from Lesson 3: Germination).

					<ul style="list-style-type: none"> • Base ten (ten sticks s optional, see Adaptive teaching). • Devices to record video or audio (optional s see Adaptive teaching).
Five: Plant life cycle	<ul style="list-style-type: none"> • To identify stages of a plant's life cycle. <p>Working scientifically</p> <ul style="list-style-type: none"> • To draw and label diagrams. 	<ul style="list-style-type: none"> • I can describe the stages of a plant's life cycle. • I can sequence the stages of a plant's life cycle. <p>Working scientifically</p> <ul style="list-style-type: none"> • I can draw diagrams to represent the stages of a plant's life cycle. 	<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. <p>Working scientifically</p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> - Using their observations and ideas to suggest answers to questions. 	<ul style="list-style-type: none"> - diagram - flower - germinate - growth - leaf - life cycle - roots - seed - seedling - shoot - 	<ul style="list-style-type: none"> - Whiteboards and pens (one each). - Chalk (at least one per group of five). - 12 cones. - Scissors (one each). - Link: BBC Bitesize: What is the life cycle of a plant?
Six: Plant care	<ul style="list-style-type: none"> • To recognise what plants need for healthy growth. <p>Science in action</p> <ul style="list-style-type: none"> • To recognise that humans have a responsibility to care for plants. 	<ul style="list-style-type: none"> • I can recall what plants need for healthy growth. <p>Science in action</p> <ul style="list-style-type: none"> • I can describe why healthy plant growth is important. • I can describe the impact of humans on plant growth in the environment. 	<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. <p>Working scientifically</p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> • Asking simple questions and recognising that they can be answered in different ways. • Observing closely, using simple equipment. • Using their observations and ideas to suggest answers to questions. • Gathering and recording data to help in answering questions. 	<ul style="list-style-type: none"> - condition - germinate - growth - measure - observe - wilt 	<ul style="list-style-type: none"> - Equipment for the plant diary task: <ul style="list-style-type: none"> o magnifying glasses (one between two); o rulers (one between two); o the pupil's plants from Lesson 1: What do seeds need to grow? (one each); o the pupil's plant diaries from Lesson 2: Seeds and bulbs (one each). - The Resource: Knowledge organiser: Science s Plant growth (one between two s see Lesson 1: What do seeds need to grow?). - Base ten (ten sticks s optional, see Adaptive teaching).

					<ul style="list-style-type: none"> - Devices to record video or audio (optional s. see Adaptive teaching). - Link: Assessment s Science KSI: Plant growth. - Link: Bean timelapse on VideoLink
Assessment: Assess topic using end of unit quiz and assessment sheet.					



Lesson	Learning Objective	Success Criteria	National Curriculum Links	Vocabulary	Resources
One: Life processes	<ul style="list-style-type: none"> To identify some of the characteristics of living things. 	<ul style="list-style-type: none"> I can ask questions to find out what living things have in common. I can name some of the life processes. I can give examples of how life processes apply to plants and animals. 	<ul style="list-style-type: none"> Explore and compare the differences between things that are living, dead, and things that have never been alive. <p>Working scientifically (non-statutory) Pupils should:</p> <ul style="list-style-type: none"> Raise and answer questions that help them to become familiar with the life processes that are common to all living things. 	<ul style="list-style-type: none"> excretion growth life process movement nutrition reproduction sensitivity 	<ul style="list-style-type: none"> A device to record video
Two: It feel good to be alive	<ul style="list-style-type: none"> To recognise the difference between things that are alive, were once alive or have never been alive. Working scientifically: To classify objects into groups. 	<ul style="list-style-type: none"> I can recall some of the life processes. I can name objects that are living, were once alive or have never been alive. I can classify objects into groups, giving reasons for my choices. 	<ul style="list-style-type: none"> Explore and compare the differences between things that are living, dead, and things that have never been alive. 	<ul style="list-style-type: none"> alive analyse classify dead excretion nutrition reproduction sensitivity 	<ul style="list-style-type: none"> Clipboards (one each). Link: BBC Bitesize - Dead, living and non-living
Three: Introduction to habitats	<ul style="list-style-type: none"> To identify plants and animals in different habitats. 	<ul style="list-style-type: none"> I can name four different habitats. I can match animals and plants to their habitats. I can describe what a habitat is like. 	<ul style="list-style-type: none"> Identify and name a variety of plants and animals in their habitats, including microhabitats. 	<ul style="list-style-type: none"> coastal habitat ocean predator rainforest woodland 	<ul style="list-style-type: none"> Mini whiteboards and pens (one each). Sticky tack (see Main event). Link: BBC Bitesize - Coastal habitats Link: BBC Bitesize - Woodland habitats Link: BBC Bitesize - Ocean habitats Link: BBC Bitesize - Rainforest habitats Link: BBC Bitesize - Polar habitats
Four: Woodland habitats	<ul style="list-style-type: none"> To identify how a habitat provides animals and plants with what they need to survive. 	<ul style="list-style-type: none"> I can use a website to retrieve information. I can name woodland plants and animals. 	<ul style="list-style-type: none"> 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. Identify and name a variety of plants and animals in their habitats. 	<ul style="list-style-type: none"> carnivore diet habitat herbivore mammal omnivore predator 	<ul style="list-style-type: none"> Mini whiteboards and pens (one between two). Devices with internet access (one between two see Main event). Link: Woodland Trust

	<ul style="list-style-type: none"> Working scientifically: To carry out research to find answers to questions. 	<ul style="list-style-type: none"> I can give examples of how animals use the woodland habitat for food and shelter. 	-	<ul style="list-style-type: none"> shelter woodland 	
Five: Rainforest and ocean habitats	<ul style="list-style-type: none"> To recognise how animals and plants depend on each other. 	<ul style="list-style-type: none"> I can name animals in a rainforest and ocean habitat. I can recall that a plant produces its own food. I can give examples of how animals and plants depend on each other. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> camouflage depend habitat nutrition predator prey producer shelter 	:
Six: Food chains	<ul style="list-style-type: none"> To recall how animals get their food from plants and other animals. 	<ul style="list-style-type: none"> I can name a producer and place it at the beginning of a food chain. I can name predators that prey on other animals. I can use arrows to show the order of a food chain. 	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"> camouflage depend energy food chain habitat nutrition predator prey producer shelter 	<ul style="list-style-type: none"> Whiteboards and pens (one each). Scissors (one each s. see Main event). Link: BBC Bitesize - What is a food chain?
Assessment: Assessment quiz and knowledge sheet.					



Science - Year 2 - Medium Term Plan
Spring 1: Microhabitats

Asking questions about minibeasts and using scientific enquiry methods to find answers.



Lesson	Learning Objective	Success Criteria	National Curriculum Links	Vocabulary	Resources
One: Identifying and classifying minibeasts	Working scientifically: To classify a variety of minibeasts.	<ul style="list-style-type: none"> - I can name a variety of minibeasts. - I can recognise the different characteristics of minibeasts. - I can sort minibeasts into groups based on my observations. - Working scientifically: I can organise questions to create a simple classification key. 	<ul style="list-style-type: none"> - 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 microhabitats. <p>Working scientifically Pupils should be taught the scientific skills of:</p> <ul style="list-style-type: none"> - Identifying and classifying. 	<ul style="list-style-type: none"> - characteristics - classification - key - classify - criteria - identify - invertebrate - microhabitat - minibeast 	<ul style="list-style-type: none"> - A tray of leaf litter containing some minibeasts (one for class demonstration s. see Attention grabber). - A device to take photographs (one for the teacher). - Link: BBC Bitesize - What are minibeasts?
Two: Introduction to scientific enquiry	<ul style="list-style-type: none"> • Working scientifically: To recognise how scientists answer questions. 	<p>I can recognise that scientists choose the most suitable way to answer questions.</p> <p>I can ask questions about worms.</p> <p>I can use an information text to find answers to questions.</p>	<ul style="list-style-type: none"> • 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 microhabitats. <p>Working scientifically Pupils should be taught to:</p> <ul style="list-style-type: none"> • Ask simple questions and recognise that they can be answered in different ways. • Use their observations and ideas to suggest answers to questions. 	<ul style="list-style-type: none"> - criteria - microhabitat - research 	<ul style="list-style-type: none"> • Opaque box with a lid containing three earthworms. • Materials to make a class wormery (teacher demonstration s. see Main event): <ul style="list-style-type: none"> ○ 1 litre clear plastic bottle; ○ soil (about a third of a litre); ○ sand (about a third of a litre); ○ leaf litter (one handful); ○ large spoon; ○ scissors; ○ A3 sheet of black paper/card; ○ sticky tape.
Three: Minibeast hunt	<ul style="list-style-type: none"> • To recognise that living things live in habitats to which they are suited. • Working scientifically: To gather and record data to answer a question. 	<ul style="list-style-type: none"> - I can make close observations and use equipment safely. - I can give examples of how microhabitats suit the needs of minibeasts. - Working scientifically: I can gather data and record it in a survey. 	<ul style="list-style-type: none"> • 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 microhabitats. <p>Working scientifically</p>	<ul style="list-style-type: none"> • camouflage • microhabitat • minibeast • survey 	<ul style="list-style-type: none"> • A device to take photographs (one for the teacher). • Equipment for a minibeast hunt (one between two s. see Main event): <ul style="list-style-type: none"> ○ bug pots with lids; ○ medium-sized paintbrushes; ○ magnifying glasses.

			<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • Observe closely, using simple equipment. • Use their observations and ideas to suggest answers to questions. • Gather and record data to help in answering questions. 		<ul style="list-style-type: none"> • A trowel/large spoon to dig in the soil (one for the teacher). • Clipboards (one each).
<p>Four: Planting an experiment</p>	<p>Working scientifically: To ask questions and plan how to carry out an experiment.</p>	<ul style="list-style-type: none"> • I can ask questions about the conditions minibeasts prefer. • I can suggest what observations to make. • I can order the steps of a method. 	<ul style="list-style-type: none"> • Ask simple questions and recognise that they can be answered in different ways. • Observe closely, using simple equipment. • Perform simple tests. • Use their observations and ideas to suggest answers to questions. • Gather and record data to help in answering questions. 	<ul style="list-style-type: none"> • condition • data • food chain • method • test 	<ul style="list-style-type: none"> • Whiteboards and pens (one each). • Scissors (one each). • Coloured pencils (two each). • Link: BBC Bitesize - Why do scientists ask questions?
<p>Five: Woodlice experiment</p>	<p>Working scientifically: To carry out an experiment and record data in a table.</p>	<ul style="list-style-type: none"> • I can use a stopwatch. • I can use tally marks to record results. • I can use my results to answer a question. 	<ul style="list-style-type: none"> • Identify that most living things live in habitats to which they are suited. <p>Working scientifically Pupils should be taught to:</p> <ul style="list-style-type: none"> • Ask simple questions and recognise that they can be answered in different ways. • Observe closely, using simple equipment. • Perform simple tests. • Use their observations and ideas to suggest answers to questions. • Gather and record data to help in answering questions. 	<ul style="list-style-type: none"> • comparative/fair test • conclusion • condition • method • results • tally 	<ul style="list-style-type: none"> • A lidded box with air holes, containing leaf litter and approximately 25 woodlice (see Attention grabber). • Equipment for the experiment (one per group of six s. see Main event): <ul style="list-style-type: none"> ○ Petri dish; ○ paper towel; ○ scissors; ○ paintbrush; ○ stopwatch.
<p>Six: What is a botanist?</p>	<ul style="list-style-type: none"> • To identify a variety of flowering plants. • Science in action: To understand the role of a botanist. 	<ul style="list-style-type: none"> • I can recognise similarities and differences. • I can use an identification chart to name flowering plants. • I can describe the role of a botanist. 	<ul style="list-style-type: none"> • Identify and name a variety of plants in their habitats, including microhabitats. <p>Science Working scientifically Pupils should be taught to:</p> <ul style="list-style-type: none"> • Observe closely, using simple equipment. 	<ul style="list-style-type: none"> • botanist • identify • research • species 	<ul style="list-style-type: none"> • Audio: Answerphone message. • An outdoor space. • Clipboards (one between two s. see Main event).

			<ul style="list-style-type: none"> • Identify and classify. 		<ul style="list-style-type: none"> • Magnifying glasses (optional s one between two).
Assessment: Assess topic using end of unit quiz and assessment sheet.					



Science - Year 1 - Medium Term Plan
 Spring 2: Uses of everyday materials

Comparing the suitability of materials by carrying out tests and recording data

Lesson	Learning Objective	Success Criteria	National Curriculum Links	Vocabulary	Resources
--------	--------------------	------------------	---------------------------	------------	-----------

<p>One: Objects and materials</p>	<ul style="list-style-type: none"> To recognise that objects are made from materials that suit their uses. <p>Working scientifically</p> <ul style="list-style-type: none"> To recognise that objects can be grouped. 	<ul style="list-style-type: none"> I can name objects with the same use that are made from different materials. I can name a material that is used to make objects with different uses. <p>Working scientifically</p> <ul style="list-style-type: none"> I can sort objects based on properties 	<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. <p>Working scientifically</p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> Identifying and classifying. 	<ul style="list-style-type: none"> fabric glass material metal object plastic property rock suitable wood 	<ul style="list-style-type: none"> A selection of everyday objects (approximately 18 s see Teacher knowledge). Sticky notes/paper strips (11 per pair). Equipment for the teacher demonstration (see Main event): <ul style="list-style-type: none"> 2 sorting hoops; 2 pre-written labels (wood and plastic); 2 pre-written labels (toys and plates). Scissors (one each). Whiteboard pens (optional s one between two). 'The Smartest Giant in Town' story by Julia Donaldson.
<p>Two: Which material is suitable?</p>	<p>To recognise that objects are made from materials that suit their uses.</p>	<ul style="list-style-type: none"> I can describe the properties of materials. I can explain why a material is suitable for its object's use. I can explain why some materials would not be suitable for a particular use. 	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p>	<ul style="list-style-type: none"> fabric glass material metal object property rock suitable wood 	<p>Equipment for role play (one of each item for the teacher):</p> <ul style="list-style-type: none"> high visibility jacket; hard hat; clipboard and pen. <p>'The Smartest Giant in Town' by Julia Donaldson</p>
<p>Three: Stretch it, twist it, bend it, squash it!</p>	<ul style="list-style-type: none"> To recognise that the shape of some solid objects can be changed. <p>Working scientifically</p> <ul style="list-style-type: none"> To record data in a table. 	<ul style="list-style-type: none"> I can observe how actions change the shape of solid objects. I can describe what happens to objects after an action has been performed. <p>Working scientifically</p> <ul style="list-style-type: none"> I can record my findings in a table. 	<p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	<ul style="list-style-type: none"> bend elastic flexible pull push stretch squash twist 	<ul style="list-style-type: none"> Whiteboard and pen (one each). A camera (optional s one for the teacher). Modelling dough, approximately the size of a golf ball (one each s see Teacher knowledge). Everyday objects (at least 20 s see Teacher knowledge).
<p>Four:</p>	<ul style="list-style-type: none"> To compare the suitability of 	<ul style="list-style-type: none"> I can work in a group to carry out a test. 	<ul style="list-style-type: none"> Identify and compare the suitability of a variety of everyday materials, including 	<ul style="list-style-type: none"> compare data elastic 	<p>'The Smartest Giant in Town' story by Julia Donaldson.</p>

<p>Testing stretchiness</p>	<p>materials for particular uses.</p> <p>Working scientifically</p> <ul style="list-style-type: none"> To gather data and use it to answer a question. 	<ul style="list-style-type: none"> I can use non-standard units to measure. I can compare results to answer a question. - 	<p>wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> <ul style="list-style-type: none"> Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. <p>Working scientifically</p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> Observing closely, using simple equipment. Performing simple tests. Gathering and recording data to help in answering questions. 	<p>flexible material property stretch stretchy suitable</p>	<p>Equipment for the teacher demonstration (optional s see Attention grabber):</p> <ul style="list-style-type: none"> 1 small dog figurine; 1 tray containing mud made from soil/cocoa powder and water. 30 pre-prepared strips of material for testing (see Teacher knowledge). Whiteboard and two pens (one per group of six). Connecting cubes for measuring (at least 20 per group of six). A camera
<p>Five: Testing strength</p>	<ul style="list-style-type: none"> To recognise that the strength of some materials can be changed. <p>Working scientifically</p> <ul style="list-style-type: none"> To record data in a block graph. 	<ul style="list-style-type: none"> I can measure strength using non-standard units. I can label the categories on a block graph. I can use a block graph to answer questions. - 	<ul style="list-style-type: none"> Observing closely, using simple equipment. Performing simple tests. Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions. 	<ul style="list-style-type: none"> block graph data material non-standard unit property record suitable strong 	<p>Equipment for the teacher demonstration:</p> <ul style="list-style-type: none"> 2 piles of books; A4 paper; 1 thin notebook; 1 dog figurine (optional); 2s3 connecting cubes. <p>Equipment for the paired task (one per pair):</p> <ul style="list-style-type: none"> 6 thick books (e.g. dictionaries, atlases or thesauruses); 1 sheet of A4 paper; 1 ruler; 1 whiteboard and pen; connecting cubes (at least 20). Coloured pencils
<p>Six: Eco-friendly materials</p>	<ul style="list-style-type: none"> To compare the suitability of materials for particular uses. <p>Science in action</p> <ul style="list-style-type: none"> To recognise that some materials are 	<ul style="list-style-type: none"> I can name properties of materials that make them suitable for their uses. <p>Science in action</p> <ul style="list-style-type: none"> I can give examples of how plastic is harmful to the environment. 	<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"> environment material object plastic pollution property recycle 	<ul style="list-style-type: none"> Whiteboards and pens (one each). Link: Assessment: Science Y2: Uses of materials (see Wrapping up). Link: BBC Bitesize - What is plastic?

	harmful to the environment.	• I can select environmentally friendly materials. -		<ul style="list-style-type: none">• reduce• reuse• suitable	
Assessment: Assess topic using end of unit quiz and assessment sheet.					



Science Year 2 - Medium Term Plan
Summer 1: Animals: Life cycles
Identifying the stages of animal life cycles and carrying out tests to record growth



Lesson	Learning Objective	Success Criteria	National Curriculum Links	Vocabulary	Resources
One: The human life cycle.	To identify different stages of the human life cycle.	<ul style="list-style-type: none"> - I can identify animal offspring. - I can order the human life cycle. - I can describe how humans change. 	<ul style="list-style-type: none"> - Notice that animals, including humans, have offspring which grow into adults. 	-	<ul style="list-style-type: none"> - Flipchart (one for the teacher & see Attention grabber). - Scissors (optional & see Adaptive teaching). - Glue sticks (optional & see Adaptive teaching). - Measuring hands activity (optional & see Wrapping up): <ul style="list-style-type: none"> o connecting cubes (ten per table); o whiteboards and pens
Two: Life cycles	To know which offspring come from which parent animal.	<ul style="list-style-type: none"> • I can identify stages of animal life cycles. • I can match the stages of animal life cycles with the correct animal. • I can order the stages of an animal's life cycle. 	<ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults. 	<ul style="list-style-type: none"> • butterfly • caterpillar • egg • frog • froglet • lamb • life cycle • live young • pupa • sheep • spawn • tadpole 	<ul style="list-style-type: none"> - Quiz: Which life cycle? - Whiteboard and pen (one each). - Flipchart (one for the teacher & see Attention grabber). - Making a life cycle wheel (per child & see Main event): <ul style="list-style-type: none"> o scissors; o glue stick; o 1 split pin; o sticky tack
Three: Growth	<ul style="list-style-type: none"> • To observe and measure growth in humans. <p>Working scientifically</p> <ul style="list-style-type: none"> • To use simple measuring equipment. 	<ul style="list-style-type: none"> • I can apply my understanding of the human life cycle. • I can explain how humans change. <p>Working scientifically</p> <ul style="list-style-type: none"> • I can read a scale in centimetres. • I can find the start of the measuring equipment. • I can read my measurements. 	<ul style="list-style-type: none"> • Notice that animals, including humans, have offspring which grow into adults. <p>Working scientifically</p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> • Asking simple questions and recognising that they can be answered in different ways. • Observing closely, using simple equipment. • Performing simple tests. 	<p>growth</p> <p>height</p> <p>measure</p>	<ul style="list-style-type: none"> • A volunteer from each year group in the school to measure (see Teacher knowledge). • Tape measure (one per group of five & see Main event). • Flipchart (one for the teacher & see Main event). • Ruler (one each). • Scissors (one each). • Glue sticks

			<ul style="list-style-type: none"> Identifying and classifying. Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions. 		
<p>Four: Survival</p>	<ul style="list-style-type: none"> To identify and list the basic needs for survival for humans and animals. <p>Working scientifically</p> <ul style="list-style-type: none"> To use secondary sources to research. 	<ul style="list-style-type: none"> I can explain the three things animals need to survive. I can explain how a particular species survives. <p>Working scientifically</p> <ul style="list-style-type: none"> I can find the information I need from a source. I can present research as a poster. 	<ul style="list-style-type: none"> Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). <p>Working scientifically</p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways. Observing closely, using simple equipment. Performing simple tests. Identifying and classifying. Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions. 	<ul style="list-style-type: none"> air basic needs essential food survive water 	<ul style="list-style-type: none"> Whiteboards and pens (one each). Flipchart (one for the teacher s see Attention grabber). A5 paper (one each). A recording device (optional s see Adaptive teaching). Link: BBC Earth - Wildebeest
<p>Five: Exercise and hygiene</p>	<ul style="list-style-type: none"> To recognise the importance of exercise and personal hygiene. <p>Working scientifically</p> <ul style="list-style-type: none"> To make observations over time. 	<ul style="list-style-type: none"> I can describe how germs spread. I can explain why washing hands or changing clothes is important. <p>Working scientifically</p> <ul style="list-style-type: none"> I can use a results table. I can record results each day. 	<ul style="list-style-type: none"> Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. <p>Working scientifically</p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills:</p> <ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways. Observing closely, using simple equipment. Performing simple tests. Identifying and classifying. Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions. 	<ul style="list-style-type: none"> exercise fitness germs health hygiene 	<ul style="list-style-type: none"> A toothbrush (one for demonstration s see Attention grabber). Soap (one for demonstration s see Attention grabber). Glitter or UV pen (one for the teacher s see Attention grabber). Cleaning wipes (see Attention grabber). A device with a stopwatch (one for the teacher s see Main event).
<p>Six: Balanced diet</p>	<ul style="list-style-type: none"> To identify how to have a balanced diet. <p>Working scientifically</p>	<ul style="list-style-type: none"> I can name foods in each group. I can create a balanced shopping bag. 		<ul style="list-style-type: none"> carbohydrates dairy fruit oils 	<ul style="list-style-type: none"> The children's Activity: Results table from Lesson 5: Exercise and hygiene. 1 shopping bag (see Main event).

	<ul style="list-style-type: none"> • To interpret collected results. 	<p><i>Working scientifically</i></p> <ul style="list-style-type: none"> • I can recognise a pattern in data. • I can decide whether my data answers the question. 		<p><i>proteins</i> <i>spreads</i> <i>vegetables</i></p>	<ul style="list-style-type: none"> • A selection of foods from each food group (see Main event): <ul style="list-style-type: none"> ○ carbohydrates (e.g. potatoes, pasta and bread); ○ proteins (e.g. lentils and cooked meat); ○ oils and spreads (e.g. butter); ○ fruits and vegetables (e.g. grapes and tomatoes); ○ dairy and dairy alternatives (e.g. cheese).
<p>Assessment: Assess topic using end of unit quiz and assessment sheet.</p>					



Summer 2: Making connections: 31st May

<i>Lesson</i>	<i>Learning Objective</i>	<i>Success Criteria</i>	<i>National Curriculum Links</i>	<i>Vocabulary</i>	<i>Resources</i>
<i>One:</i>		-		-	-
<i>Two:</i>		-		-	-
<i>Three:</i>		-			
<i>Four:</i>		-		-	-
<i>Five:</i>		-		-	-
<i>Six:</i>		-			
<i>Assessment:</i> 1.					