

Overview:

	AUTUMN 1	AUTUMN 2	SPRING 1	Spring 2	SUMMER 1	SUMMER 2
Unit of Work National Curriculum	Uses of everyday materials	Living things and their habitats	Animals including humans	Animals including humans	Plants (Might need to plant some seeds in Spring 2)	Plants
Switched on Science	Topic 2 Materials monster Topic 3 Squash, bend, twist and stretch	Topic 4 Our local environment	Topic 1 Healthy me	Topic 1 Healthy me	Topic 5 Young gardeners	Topic 5 Young gardeners
Plant diary	September and October activities	November and December activities	January and February activities	March and April activities	May and June activities	July and August activities
Substantive knowledge Key knowledge	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and	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	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)	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)	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.	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.

	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	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 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.	Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.		
Disciplinary knowledge Working scientifically	Pupils might work scientifically by: comparing the uses of everyday materials in and around the school with materials found in other places (at home, the journey to school, on visits, and in stories, rhymes and songs); observing closely, identifying and	Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Perform simple tests. Identify and classify. Use observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.	Pupils might work scientifically by: observing, through video or first-hand observation and measurement, how different animals, including humans, grow; asking questions about what things animals need for survival and what humans need to stay healthy; and suggesting ways to find answers to their questions.	Pupils might work scientifically by: observing, through video or first-hand observation and measurement, how different animals, including humans, grow; asking questions about what things animals need for survival and what humans need to stay healthy; and suggesting ways to find answers to their questions.	Pupils might work scientifically by: observing and recording, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb, or observing similar plants at different stages of growth; setting up a comparative test to show that plants need light and water to stay healthy.	Pupils might work scientifically by: observing and recording, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb, or observing similar plants at different stages of growth; setting up a comparative test to show that plants need light and water to stay healthy.

	classifying the uses of different materials, and recording their observations					
Cultural Capital Scientists	Charles Macintosh- Waterproof material John MacAdam- Tarmac	Rachel Carson- Marine Pollution Liz Bonnin Conservationist Eugenie Clark- marine biologist	Florence Nightingale Pioneer of modern nursing in GB Elizabeth Garrett Anderson - First British female physician and surgeon Steve Irwin -Wildlife expert Robert Winston Human Scientist	Florence Nightingale Pioneer of modern nursing in GB Elizabeth Garrett Anderson - First British female physician and surgeon Steve Irwin -Wildlife expert Robert Winston Human Scientist	Captain Cook- Botanists Agnes Arber Botanist Alan Titchmarsh- Botanist & Gardener	Captain Cook- Botanists Agnes Arber Botanist Alan Titchmarsh- Botanist & Gardener
Suggestions for school visits	London Zoo October Year 2 London Zoo - Staff Drive - Google Drive	 Year 2 Local walk - Staff Drive - Google Drive	Science Museum Year 2 Science Museum - Staff Drive - Google Drive			Kew Gardens Year 2 Kew Gardens - Staff Drive - Google Drive
Teacher CPD links	Resources - Google Docs https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/425618/PRIMARY	https://www.reachoutcpd.com PLAN Progression - Staff Drive - Google Drive	https://my.risingstars-uk.com/CourseHome.aspx?csid=9781510446151	https://classroom.thenational.academy/subjects-by-key-stage	Science - Staff Drive - Google Drive Science - Staff Drive - Google Drive	https://www.stem.org.uk/primary-science


[_national_curriculum - Science.pdf](#)

Units lesson by lesson

Year 2 - Living Things and their Habitat

Pupils previously learnt:

- Draw information from a simple map.
- Explore the natural world around them.
- Describe what they see, hear and feel whilst outside.
- Recognise some environments that are different to the one in which they live.


Lesson number	North Star Question 	Pupils will learn		Key Vocabulary
		Substantive knowledge	Disciplinary knowledge	
1 Lesson 1 = Google Slides	Rising stars assessment Knowledge organiser Knowledge Organiser - Science improved.pptx - Google Slides Pre topic assessment.docx - Google Docs	Teacher assessment		
2 Lesson 2 =	Recap learning from year 1 Lesson 2 - recap learning from year 1.docx - Google Docs	<ul style="list-style-type: none"> • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. 	Recap lesson	Revisit prior knowledge and vocabulary. fish, amphibians, reptiles, birds, mammals, carnivores,

Google Slides		<ul style="list-style-type: none"> Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). 		herbivores, omnivores, structure.
<p>3</p> <p>Lesson 3 - Google Slides</p>	<p>How do you know if something is living, dead or never been alive?</p> <p>How do you know? How do we know that dinosaurs were once alive?</p> <p>Lesson 3 task sheet.docx - Google Docs</p>	<ul style="list-style-type: none"> Identifying living and non-living things Indicators of living things What organisms need to survive Explore and compare the differences between things that are living, dead, and things that have never been alive <p>4.1 Livings things: Activities 1,2,3,4</p>	<p>Identifying and classifying</p> <p>Ask simple questions and recognise that they can be answered in different ways.</p> <p>Observe closely, using simple equipment.</p>	<p>Dead Living Alive Movement Growing Breathing feeding Reproducing Excretion</p>
<p>4</p> <p>Lesson 4 - Google Slides</p>	<p>Why do most living things live in habitats to which they are suited?</p> <p>What is a habitat?</p> <p>What is your habitat like? If you could choose a different habitat to live in, where would you like to live? Why?</p>	<ul style="list-style-type: none"> Defining a habitat Identify that most living things live in habitats to which they are suited describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other <p>4.2 Habitats: Activities 1,2,3,4</p>	<p>Observing closely, using simple equipment, using their observations and ideas to suggest answers to questions.</p>	<p>Habitat Shelter Food Conditions Micro-habitat Life processes Survive Support</p>

	<p>Why do you think people should look after different habitats and not destroy them?</p> <p>key vocabulary matching activity sheet.docx - Google Docs</p> <p>Lesson 4 matching habitats.docx - Google Docs</p> <p>Lesson 4 task sheet.docx - Google Docs</p> <p>Whale class photo of activity with next step questions.docx - Google Docs</p>			
<p>5 Lesson 5 = Google Slides</p>	<p>What is a microhabitat?</p> <p>Who lives in a microhabitat?</p> <p>Lesson 5 sheet.docx - Google Docs</p>	<ul style="list-style-type: none"> • Features of woodland habitats • Microhabitats in woodlands 	Observing closely, using simple equipment.	Microhabitat Minibeasts
<p>6 Lesson 6.pptx - Google Slides</p>	<p>How do animals obtain their food from plants and other animals?</p> <p>What is a food chain?</p>	<ul style="list-style-type: none"> • Understand and use a simple food chain. • Understand what a producer, prey and predator is. • Understand the different sources of food <p>4.3 Food chains: Activities 1,2,3,4</p>	Observing closely, using their observations and ideas to suggest answers to questions, Identifying and classifying.	Producer, prey, predator, food chain, identifying, classifying, obtain

7	Cultural Capital Visitor, visit, scientist	London Zoo trip activities	Take pictures to be used for writing recount activity	
8	Cultural Capital Visitor, visit, scientist	London Zoo writing recount		What is a recount? Adapt for EAL/SEN
9	Plant Diary			
10	Rising Stars end of unit assessment	Teacher to identify any gaps and plan recap		

Year 2- Plants


Pupils previously learnt:				
<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, including trees. 				
Lesson number	North Star Question 	Pupils will learn		Key Vocabulary
		Substantive knowledge	Disciplinary knowledge	
1	Rising stars assessment Front cover (KWL-whole class) Knowledge organiser	Teacher assessment		
2	Recap learning from year 1	Identify and name a variety of common	Revision lesson	Petals, roots, leaves, stem,

		wild and garden plants, including deciduous and evergreen trees identify Describe the basic structure of a variety of common flowering plants, including trees.		anther, soil, absorb Transports Pollen attract
3	What is growing in our school grounds? What shall we grow?	To identify different plants growing in our school garden, including flowering plants. What type of vegetables and fruit are grown in our garden? 5.1 Young gardeners: Activities 1, 2	Identifying and classifying Asking and answering questions	Bulb, corms, germinate, properties, root, stem, tuber, annual / compost / flower / fruit / germinate / germination / fruit / health / healthy / leaf / plant / root / seed / seedling / soil / stem / vegetable / properties / materials / bulb / leaves
4	What do seeds need for germination?	<ul style="list-style-type: none"> • To understand germination • To explain what seeds need for germination Activity: 3	Perform simple test Observe closely	germinate, germination
5	What do plants need to grow and stay healthy?	<ul style="list-style-type: none"> • Plants need sun, water and the right conditions to grow. Note: Seeds and bulbs need water to grow but most do not need light; seeds and bulbs have a store of food inside them.	Perform simple test Observe closely Using their observations and ideas to suggest answers to questions.	Grow Healthy Sunlight/shade Water Right conditions Temperature moves
6 7	How do different variables affect plant growth? Teach after KEW Gardens	<ul style="list-style-type: none"> • How to plant a seed. • Conditions for plant growth. • Importance of using a fertiliser is. Activity 4	Perform comparative test Using their observations and ideas to suggest answers to questions.	Fertiliser Measurement Amount Variables

			<p>Observing closely</p> <p>Gather and record data to help answer questions</p> <p>bar graph - use class recording sheet</p>	
8	What are the stages in a bean life cycle?	<ul style="list-style-type: none"> To know the requirements of plants for germination, growth and survival. To know the processes of reproduction and growth in plants. 	<p>Using their observations and ideas to suggest answers to questions.</p> <p>Identifying and classifying</p>	<p>Roots</p> <p>Flowering</p> <p>Germination</p> <p>Photosynthesis</p> <p>Seed</p> <p>Survival, Root, Conditions</p>
9 10	What is the difference between seeds and bulbs?	<ul style="list-style-type: none"> The difference between seeds and bulbs. Define a seed and a bulb. <p>Activity 7</p>	Identifying and classifying	<p>Same</p> <p>Different</p> <p>Seeds</p> <p>Bulbs</p> <p>Store</p>
11	What are the different types of vegetables?	<ul style="list-style-type: none"> Different vegetable types Food crops 	<p>Identifying and classifying</p> <p>Using their observations and ideas to suggest answers to questions.</p>	<p>Food crops</p> <p>Root vegetable</p> <p>Leaf vegetable</p> <p>Stem vegetable</p> <p>Flower vegetable</p> <p>Conditions</p>
12	What conditions do different fruits need to grow?	<ul style="list-style-type: none"> - What is a fruit - What affects the growth of fruits? - Why do some fruits grow in different climates? - Why do some plants only grow in certain countries? 	<p>Identifying and classifying</p> <p>Use observations and ideas to answer and ask questions</p>	<p>Fruits</p> <p>Seed</p> <p>Climate</p> <p>Growth</p>

14 15	Cultural capital Scientist, visit, visitor	Visit to Kew Gardens Write a recount	Asking and answering questions Observing closely	Year 2 Kew Gardens - Staff Drive - Google Drive
16 17	Plant Diary			
18	Rising Stars end of unit assessment	Teacher to identify any gaps and plan recap		


Year 2- Animals Including Humans

<p>Pupils previously learnt:</p> <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. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 				
Lesson number	North Star Question 	Pupils will learn		Key Vocabulary
		Substantive knowledge	Disciplinary knowledge	
1 Slides	Rising stars assessment Front cover (KWL-whole class) Knowledge organiser	Teacher assessment		
2	Review learning from year 1	Identify, name, draw and label the basic parts of the human body and say which part of the body is associated	Recap lesson	Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales,

		with each sense.		feathers, fur, beak, paws, hooves
3	How do animals change as they grow?	<ul style="list-style-type: none"> Names of animal babies 	Sorting and classifying	Grow, change, compare, chick, bird, caterpillar, insect, bear, mammal, duckling, calf, tadpole, amphibian, kid, owlet, piglet, pup.
4	How does an animal change during its life cycle?	<ul style="list-style-type: none"> Understand the growth of animals through life cycles. 	Using their observations and ideas to suggest answers to questions.	Pregnant, spawn, froglet, tadpole, frog, kitten, cat.
5	What is the human life cycle?	<ul style="list-style-type: none"> Understand the growth of humans through life cycles. 	Using their observations and ideas to suggest answers to questions.	growth, baby, toddler, childhood, adolescence, adulthood, old age
6	What are the basic needs of a human? Why do we need food?	<ul style="list-style-type: none"> Understand the basic needs of a human to survive. Understand there is a difference between wants and needs. <p>1.2 Healthy choices: Activity 1</p>	To classify different life needs.	Air, food, water, survive, basic needs, healthy
7	What are the different food groups?	<ul style="list-style-type: none"> Know there are different food groups. Be able to identify some foods in the different food groups <p>Activity 2, 3, 4</p>	Classifying	Protein, carbohydrates, fats, sweets, fruit and vegetables, dairy
8	What is a balanced diet? (children) to begin bread	<ul style="list-style-type: none"> The importance of a balanced diet. 	Classifying	Balanced, diet, amount, protein, carbohydrates, fats,

	experiment)	<ul style="list-style-type: none"> How to create a balanced diet meal 		sweets, fruit and vegetables,
9 10	How does exercise affect your body? What makes you happy?	<ul style="list-style-type: none"> Explore the effects of exercise on heart rate, breathing and temperature. <p>1.1 Body and mind: Activities 1,2,3,4</p>	Performing simple tests, observing closely using simple equipment, gathering and recording data, Using their observations and ideas to suggest answers to questions.	Heart rate, breathing rate, temperature, exercise, rest, beats per minute.
11 12	Why is it important to be hygienic? (mouldy bread experiment)	<ul style="list-style-type: none"> The importance of hygiene. Why it is especially important to wash hands when cooking and eating. How not washing our hands makes us sick. 	Perform a comparative test Observing through first hand observation and measurement, recording data.	Mould, bread, most, least, germs, grow, unwashed, control, sanitised.
12	How do we get sick?	<ul style="list-style-type: none"> Observe how germs spread through contact. How germs make us sick. <p>1.3 Coughs and sneezes Activities 1,2</p>	Performing simple tests, observing closely using simple equipment, gathering and recording data.	Contact, spread, germs, bacteria, covid
13 14	Cultural Capital Visit, visitor, scientist	Science Museum - The human body Write a recount	Ask and answer questions Observe closely	Year 2 Science Museum - Staff Drive - Google Drive
15 16	Plant Diary			
17	Rising stars end of unit assessment	Teacher to identify any gaps and plan recap		

Year 2- Uses of Everyday Materials

Pupils previously learnt:				
<ul style="list-style-type: none"> • Distinguish between an object and the material from which it is made. • Identify and name a variety of everyday materials, including wood, plastic, glass, metal, 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 physical properties. 				
Lesson number	North Star Question 	Pupils will learn		Key Vocabulary
		Substantive knowledge	Disciplinary knowledge	
1 Slides	Rising stars assessment Front cover (KWL-whole class) Knowledge organiser	Teacher assessment		
2	Recap year 1 learning	<ul style="list-style-type: none"> • Distinguish between an object and the material from which it is made. • Identify and name a variety of everyday materials, including wood, plastic, glass, metal, 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 physical properties. 	Recap lesson	Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through
3 4	Can you identify a material based on its properties?	<ul style="list-style-type: none"> • Sorting materials based on their properties 	Identifying and classifying	- Fabric, metal, plastic. Glass, shiny,

		2.1 Meet the materials monster: Activities 1,2, 3		shiny, fragile, strong
5 6	Why do we change materials? (add examples of why the objects are suitable on slides)	<ul style="list-style-type: none"> Why certain materials are used for different objects. 2.2 Working with materials: Activities: 1, 2,3	Using their observations and ideas to suggest answers to questions.	- Transparent, translucent, opaque, reflective, non-reflective, rigid, flexible, strong, waterproof.
7 8	Which materials are waterproof?	<ul style="list-style-type: none"> Testing whether a variety of materials used are absorbent 	Performing simple tests, using observations and ideas to answer questions, gathering and recording data.,	- Waterproof, absorbent - absorb
9 10 11 12 13	How can the shape of solid objects be changed?	<ul style="list-style-type: none"> Examples of solid objects Squashing, bending, twisting, stretching Testing different materials 3.1 Squash, squeeze, bend and twist: Activities 1-7	-Gathering and recording data to answer questions. -Identifying and classifying materials.	- Squash, bend, twist, stretch.
14	How has the use of materials changed over time?	<ul style="list-style-type: none"> Examples of material scientists Garrett morgan 	- Using observations and ideas to answer questions.	- Gas mask, heavy, non-flammable, waterproof, translucent, rigid, reflective, transparent, stretchy.
15	Cultural Capital Vist, visitor, scientist			
16 17	Plant Diary			

18	Rising Stars end of unit assessment	Teacher to identify any gaps and plan recap		
----	-------------------------------------	---	--	--

End of Year Revision Lessons

<p>What have you learned in science in year 2?</p> <p>4 lessons</p>	<p>Recap whole year learning</p> <p>Revisit each topic and plan activities:</p> <p>Living things and their habitats: collage</p> <p>Animals including humans: information leaflet online purple mash</p> <p>Materials: poster</p> <p>Plants: non-chronological report</p>
---	---