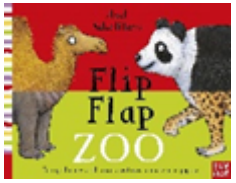
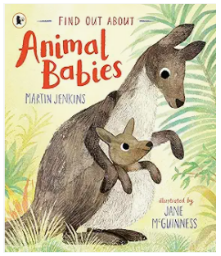
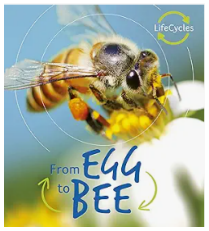
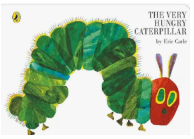
Year 2: Autumn

Animals including Humans

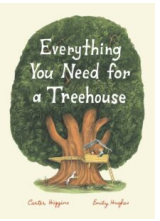
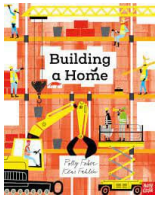
Enquiry Question	What do animals and humans need to stay alive?	
	Required Prior Knowledge	**Knowledge to be taught**
Substantive Knowledge	Name a range of animals which include animals from each of the vertebrate groups Know the terms herbivore, carnivore and omnivore. Know terms: reptile, amphibian, mammal. Name, draw and label parts of the human body and say what sense is associated with the 5 senses (Y1 Animals including Humans)	Describe how animals change as they get older. Know names of animals and their offspring e.g. goat- Kid. Order the lifecycle of different animals e.g. butterfly. Explain what humans and animals need to survive e.g. food, sleep, exercise, water, shelter. Understand the term balanced , hygiene, microorganism, germs. diet and can identify some food groups. Understand the effects of exercise on the body.
Disciplinary Knowledge		
Asking Questions	Ask and answer simple questions relevant to the topic using my scientific knowledge and vocabulary.	
Making Predictions	Make simple predictions from what I have observed.	
Setting up tests	Plan and carry out a simple test.	
Observing & Measuring	Identify a variety of animals and match to its offspring.	
Recording Data	Sort foods into their food groups and record my results. Use my drawings and art to represent my knowledge of a balanced diet.	
Interpreting & Communicating results	Communicate findings using correct scientific language, illustrations and models. Communicate how you look after different animals based on what they eat and where they live.	
Evaluating	Evaluate a simple test.	
Vocabulary	**offspring, grow, adults, nutrition, reproduce, survival, water, food, air, exercise, hygiene, survival, exercise**	

Science Capital	 **Healthcare Assistant**						
Recommended Reading							
Teaching Sequence	*INTRODUCTION* • *Begin with a question, demonstration or real-world example to spark curiosity and connect to the topic.* • *Review or revisit related concepts.*	*INVESTIGATE AND RECORD* • *Introduce new scientific ideas or concepts through hands-on activities, experiments or observations.* • *Guide pupils to understand the scientific concepts behind their exploration.*					*ASSESSMENT* • *Reflect on learning* • *Demonstrate their understanding*
Learning Questions	**What are baby animals called?**	**What do animals and humans need to stay alive?**	**Why is exercise important for humans?**	**How can humans stay healthy?**		**What is hygiene?**	**End of Topic Test**
Mastery Keys	➢ Can sequence the stages of a baby. ➢ Can describe how animals change as they get older. ➢ Develops understanding of how insects change (more than a butterfly) through lifecycle diagrams. ➢ Can explain what humans and other animals need to survive. ➢ Can describe how to keep clean and healthy.						

Year 2: Autumn

Everyday Materials

Enquiry Question	What are the properties of materials and how can they be classified?	
	Required Prior Knowledge	**Knowledge to be taught**
Substantive Knowledge	Describe the properties of materials. Sort materials using their properties. Know terms: wood, plastic, glass, metal, water and rock (Y1 Materials)	Compare the suitability of different materials including wood, metal, plastic , glass, brick, rock, paper, cardboard, water. Know that shapes of solid objects can be changed by squashing, bending, twisting and stretching. Describe similarities and differences of materials.
Disciplinary Knowledge		
Asking Questions		
Making Predictions	Make predictions based on the best materials to block out light.	
Setting up tests	Carry out simple comparative test using my own ideas.	
Observing & Measuring	Identify a variety of materials by looking at objects closely.	
Recording Data	Record my results in a table.	
Interpreting & Communicating results	Draw a basic conclusion using scientific language and consider if materials are suitable for purpose. Report and interpret my findings.	
Evaluating	Evaluate my test and suggest improvements.	
Vocabulary	**Names of materials: wood, plastic, glass, metal, water, rock, brick, paper, fabric, card, rubber, suitable/unsuitable, use/useful, hard/soft, stretchy/stiff. Rigid/flexible, waterproof/absorbent, strong/weak, rough/smooth, transparent/opaque, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching.**	

Science Capital	 **John Dunlop**						
Recommended Reading							
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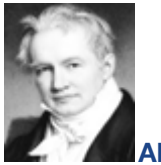
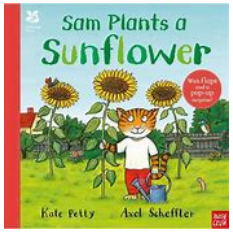
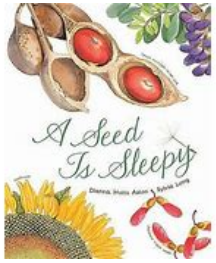
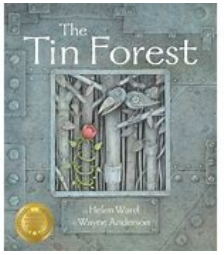
Learning Questions	**What do we already know about materials?**	**What are the properties of materials and how can we classify them?**					**End of Topic Test**
Mastery Keys	➢ Can name an object, say what material it is made from, identify properties and make a link between property and use. ➢ Whilst changing a shape of an object can describe the actions used. ➢ Can use suitable vocabulary. ➢ Simple tests relevant to properties. ➢ Describe similarities and differences.						

Year 2: Spring

Plants

Enquiry Question	What changes how plants grow?	
	Required Prior Knowledge	**Knowledge to be taught**
Substantive Knowledge	Name common plants and describe the basic parts of flowering plants e.g. leaf, stem, petal, flower, stalk, bud, roots, fruit, bark, blossom. Describe key features of trees and plants e.g. shapes of leaves, colour of flower, Talk about plant life cycles. Know basic parts of a plant e.g. leaf, stem, petal etc. (Y1 Plants)	Describe how plants have grown from seeds and bulbs and how they have developed over time. Know conditions for plant growth. Spot similarities and differences in bulbs and seeds. Order parts of the plant lifecycle. Know all parts of the plant and their function. Know terms: light, shade, sun, warm, grow, healthy, growth, germinate
Disciplinary Knowledge		
Asking Questions	Ask questions to investigate.	
Making Predictions	Make basic predictions.	
Setting up tests	Carry out simple tests.	
Observing & Measuring	Make observations on how a plant grows. Observe plants in different climates.	
Recording Data	Label parts of a flower. Use a Venn diagram to sort and classify.	
Interpreting & Communicating results	Communicate clearly how plants grow.	
Evaluating	Evaluate learning.	
Vocabulary	**leaf, flower, blossom, bud, petal, berry, root, seed, stalk, trunk, branch, stem, bark, fruit, light, shade, healthy, germinate, climate, nutrients**	

Science Capital	 **Carl Linnaeus**  **George Washington Carver**  **Alexander Von Humboldt**					
Recommended Reading						
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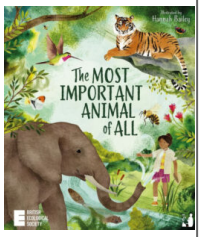
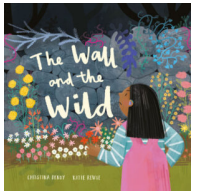
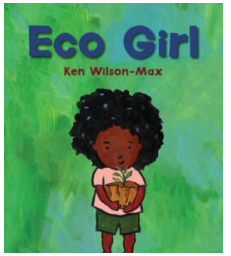
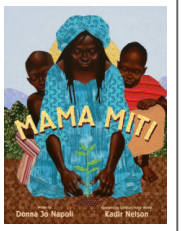
Learning Questions	**What do we know about plants?**	**What is the lifecycle of a plant?**	**What are bulbs?**	**What do plants need to be healthy?**	**How does the climate affect plants?**	**End of Topic Test**
Mastery Keys	➢ Can describe how plants that have grown from seeds and bulbs have developed over time. ➢ Can identify plants that grew well in different conditions. ➢ Can spot similarities and differences between bulbs and seeds. ➢ Can nurture seeds and bulbs into mature plants identifying the different requirements of different plants.					

Year 2: Summer Living things and their habitats

Enquiry Question	What are habitats and why do they need to be protected?	
	Required Prior Knowledge	**Knowledge to be taught**
Substantive Knowledge	Order the lifecycle of different animals e.g. butterfly. Explain what humans and animals need to survive e.g. food, sleep, exercise, water, shelter. Understand the term balanced , hygiene, microorganism, germs. diet and can identify some food groups. Understand the effects of exercise on the body. (Y1 Animals incl. Humans)	Find a range of items which are dead, living and never been alive. Know what a habitat and micro habitat is and identify animals which live in different habitats. Talk about features of animals and plants and how they are suited to live in particular habitats. Construct a simple food chain using terms producer, prey, predator, energy. Identify different sources of food and understand where food comes from.
Disciplinary Knowledge		
Asking Questions	Ask questions.	
Making Predictions		
Setting up tests		
Observing & Measuring		
Recording Data	Use tables and pictograms. Record observations.	
Interpreting & Communicating results	Interpret results. Draw basic conclusions. Communicate findings.	
Evaluating		
Vocabulary	**living, dead, never been alive, suited, suitable, basic need, food, food chain, shelter, move, feed, names of local habitats e.g. pond, woodland, names of micro habitats e.g. under logs, in bushes etc.**	

Science Capital							
Recommended Reading							
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Learning Questions	**What are the characteristics of living things?**	**What is a habitat?**	**What different kinds of habitats are there?**	**What animals live in our school grounds habitat?**	**Where do animals get their food?**	**What is a food chain?**	**End of Topic Test**
Mastery Keys	➢ Find a range of items which are dead, living. ➢ Can name plants/animals which live in different habitats and micro habitat. ➢ Can talk about the features of the animal/plant and how they are suited to the habitat. ➢ Can talk about what the animal eats. ➢ Can construct a food chain.						