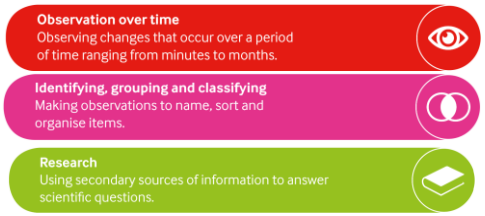
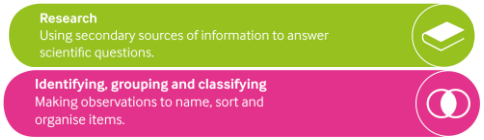
Year 2 Science progression document

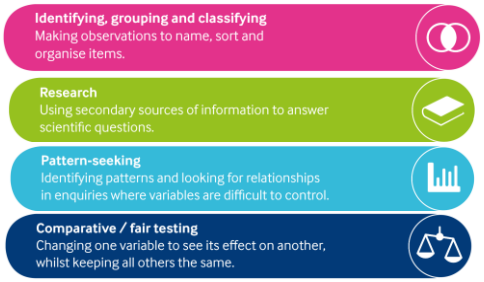
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 2	**Animals including humans** A1: I can find out about and describe the basic needs of animals, including humans, for survival (water, food and air) A2: I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene	**Animals including humans** A3: I can notice that animals, including humans, have offspring which grow into adults	**Living things and their habitats** L1: I can explore and compare the differences between things that are living, dead, and things that have never been alive. L2: I can 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.	**Living things and their habitats** L3: I can identify and name a variety of plants and animals in their habitats, including micro-habitats. L4: I can 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.	**Everyday materials** M1: I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. M2: I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	**Plants** P1: I can observe and describe how seeds and bulbs grow into mature plants P2: I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

	<u>Scientists to study:</u> Dr. Kelly Blacklock (Veterinary surgeon)		<u>Scientists to study:</u> David Attenborough		<u>Scientists to study:</u> John Dunlop	<u>Scientists to study:</u> *Angie Burnett* (A plant biologist who grows plants and sees how they react to different conditions)
	<u>Working scientifically skills</u> Asking questions and recording data. Making observations (& sorting). Presenting and communicating information.	<u>Working scientifically skills</u> Asking questions and recording data. Making observations (& sorting). Presenting and communicating information.	<u>Working scientifically skills</u> Making observations Asking questions Recording data and communicating results. Communicating information.	<u>Working scientifically skills</u> Making observations Asking questions Recording data and communicating results. Communicating information.	<u>Working scientifically skills</u> Making observations. Asking questions and making observations. Setting up a test and communicating results. Making predications and setting up tests. Identifying materials and answering questions.	<u>Working scientifically skills</u> Making observations. Asking questions and setting up simple tests. Performing simple tests Making conclusions.
Subject Specific Vocabulary						
	Survival Water Air (oxygen) Food Adult Baby Offspring Kitten Calf	Exercise Hygiene Types of food	Living Dead Never been alive Habitat Micro-habitat Suited Adapted	Energy Food chain Prey Predator Woodland Pond Desert Seashore Ocean	(As for Y1) Stiff Shiny Dull Rough Smooth Waterproof Absorbent Transparent	(As for Y1) Seed Bulb Water Light Temperature Growth

	Puppy Foal			Rainforest	Translucent Opaque Brick Fabric Foil Squashing Bending Twisting Stretching Elastic	

Term:	Unit:	Key end points:	Prior learning:	Future learning:	Common misconceptions:
Autumn	Animals including humans.  	**By the end of this unit children will be able to:** Make comparisons between themselves and people that are older and younger than them. Talk about baby animals and their parents. Describe how baby animals change as they grow. Compare baby animals with their parents and other baby animals.	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)	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	**Some children may think:** An animal's habitat is like its 'home'. All animals that live in the sea are fish. Respiration is breathing. Breathing is respiration.

				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.)	
Spring	Living things and their habitats.  	**By the end of this unit children will be able to:** Talk about and describe different habitats. Explain how an animal is designed for its habitat. Describe how animals and plants get what they need to survive. From their habitat. Order simple food chain. Say if something is living, dead or never been alive.	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 –	Recognise that living 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,	**Some children may think:** 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'.

			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 change)	identifying producers, predators and prey. (Y4 Animals including humans)	
Summer 1	Everyday materials.  	**By the end of this unit children will be able to:** Talk about and describe different objects/materials. Talk about the properties of everyday materials that we use. Understand that different materials have different properties. Talk about the suitability of materials for different objects. Explore changing materials.	Distinguish between an object and the material from which it is made. (Y1 – Everyday materials) Identify and name of a variety of everyday materials including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. (Y1- Everyday materials) Describe the simple physical properties of a variety of everyday materials. (Y1 – Everyday materials)	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	**Some children may think:** Only fabrics are materials. Only building materials are materials. Only writing materials are materials. The word rock describes an object not a material. Solid is another word for hard.

			Compare and group together a variety of everyday materials based on their simple properties. (Y1 – Everyday materials)	hardness, solubility, transparency, conductivity (electrical and thermal) and responses to magnets. (Y5 – Properties and changes of materials) Give reasons based on evidence from comparative and fair tests, for particular uses of everyday materials, including metals, wood and plastic. (Y5 Properties of materials.)	
Summer 2	Plants. 	**By the end of this unit children will be able to:** Talk about how to grow a variety of plants. Frow a variety of plants from seeds and bulbs. Care for a variety of houseplants/plants over the whole of Y2. Describe different seeds – what they look like, what they grow in to and how we use the plant. Talk about how to grow a variety of bulbs. Describe different bulbs – what they look like, what they grow into and how we use the plant. Talk about the parts of plants we eat.	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 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)	**Some children may think:** 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.

				Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Y3 – Plants)	