



Science Medium Term Plan Cycle B

Year 1/2	Autumn 1 - Types of animals	Autumn 2 - Changing Seasons	Spring 1 - Comparing Materials	Spring 2 - Changing Shapes	Summer 1 - Living Things	Summer 2 - Growing Plants
Big Concepts						
Big questions	How can we group animals?	How are the seasons different?	How do we choose materials?	Can we change materials?	What is alive, dead or was never alive?	What do living things need to survive?
Prior Knowledge	EYFS - Explore the natural world around them, making observations and drawing pictures of animals and plants Y1 - 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	EYFS - Developing an understanding of change. Observe and explain why certain things may occur (e.g leaves falling off trees, weather changes). Look closely at similarities, differences, patterns and change. Comments and questions about the place they live or the natural world.	EYFS - be able to ask questions about the place they live. Talk about why things happen and how things work. Discuss the things they have observed such as natural and found objects. Manipulates materials to achieve a planned effect.	EYFS -manipulates materials to achieve a planned effect. Y1 - Distinguish between and object and the material from which it is made. Identify and name a variety of everyday materials, including wood, metal, plastic, glass, 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 properties.	EYFS - Explore the natural world around them, making observations and drawing pictures of animals and plants Y1 - 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)	EYFS - Explore the natural world around them, making observations and drawing pictures of animals and plants. Y1 - 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. Identify and name the roots, trunk, branches and leaves of trees.
Overview of knowledge	Children will observe and recognise some simple characteristics of animals. They will learn that animals are similar to each other in some ways and different in other ways. They will begin to start grouping animals by the key features of their appearance.	In this unit children will learn that there are four seasons, the names for these seasons and that there are differences between them. They will identify and design weather symbols for the different types of weather they are likely to experience across the seasons.	In this unit children will describe the physical properties of a variety of everyday materials. They will compare and group together a variety of everyday materials on the basis of their simple properties. They will describe the properties of different materials, for example wood, metal, plastic, rubber, fur, towelling, nylon, wool,	In this unit children will learn that the shape of materials can be changed by squashing, bending, twisting and stretching. They will also explore how twisting can be used to make threads stronger and identify which materials bend or squash most easily.	In this unit children will make comparisons between things that are alive, things that are not alive, and things that were once alive. They will sort and compare animals, plants and non-living things and will create a list of features of living things. Children will notice that living things have offspring which resemble their parents and that they themselves grow into adults which reproduce. Children will order the stages	In this unit children will explore how seeds and bulbs grow into mature plants. They will investigate what plants need to grow and will find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Children will discover where seeds come from by investigating fruits and seeds in their local environment. They will carefully observe and



			sponge, cotton wool, paper, card, brick, ceramics and rock.		of growth of humans from birth to old age.	sort seeds and will also recognise how some plants are able to grow from bulbs. They will plant a variety of seeds, describing how they grow. Children will have the opportunity to plant seeds and to observe growth.
Common misconceptions		Some children may think: • it always snows in winter • it is always sunny in the summer • there are only flowers in spring and summer • it rains most in the winter	Some children may think: • 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: • 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: • an animal's habitat is like its 'home' • all animals that live in the sea are fish • respiration is breathing • breathing is respiration.	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.
Working Scientifically	Working scientifically, children will have the opportunity of observing and classifying animals in the local environment and beyond. They will classify animals that are mammals, birds, reptiles, amphibians or fish using simple observable features. They will record data, with help, in charts and tables and use these to answer questions.	Working scientifically, children will make observations and measurements over time throughout the seasons including day length, temperature, rain/snow fall, wind strength, cloud conditions and the accompanying changes to plants and animals in their local environment. They will describe and record their findings and compare them across the seasons.	Working Scientifically, children will ask questions related to the properties of materials. They will make close observations of the properties of these materials and group them according to similarities and differences. When carrying out simple comparative tests exploring different slimes, children will take simple measurements in uniform, non-standard units and record these.	Working Scientifically, children will investigate how materials can be grouped according to their properties. They will have the opportunity to perform simple tests to find the stretchiest material and observe how silly putty changes over time.	Working Scientifically, children will use observable features to identify and classify living and non-living things. They will ask questions and use their observations and ideas to suggest answers to their questions.	Working Scientifically, children will observe seeds and plants using simple equipment. They will ask simple questions about what plants need to grow and they will perform simple tests recognising that their questions can be answered in different ways. They will observe and measure the growth of the plants over time.
Key Vocabulary	Fish, mammals, amphibians, reptiles, birds, insects, carnivore, omnivore, herbivore	Season, Summer, Winter, Autumn, Spring, day, daytime, weather, wind, rain, snow, hail, sleet, fog, sun, hot, warm, cold, temperature, length, conditions, strength, symbol.	Materials, properties, wood, metal, plastic, rubber, fur, towelling, nylon, wool, sponge, cotton wool, paper, card, brick, ceramics and rock, compare, difference, similarity,	Materials, squashing, bending, twisting and stretching.	Alive, once living, never lived, animals, plants, objects, offspring, movement, respiration, sensitivity, growth, reproduction, excretion, nutrition, life process.	Water, light, temperature, seeds, healthy, growth, plants, plants, trunk, branches, leaf, root, bud, flowers, blossom, petals, root, stem, fruit, vegetables, bulb,