

Wraybury Primary School Curriculum Overview: Science

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	Offered as part of daily 'Continuous Provision' – following children's interests					
	Looking at all areas of science throughout year, highlighting changes when in the Outside Area and Eco Area					
	Focus Teaching					
	<u>Animals including Humans</u> Children will learn about "our body" and the key body parts.	<u>Seasons</u> Children will learn about the season of Autumn describing words and feelings associated with the season of Autumn.	<u>Living things and their Habitats</u> Children will learn about habitats in the Arctic and Antarctica. <u>Seasons:</u> Children will focus on the season of winter	<u>Living things and their Habitats</u> Children will focus on the habitats of animals in the African Plains <u>Seasons:</u> Children will focus on the season of Spring	<u>Living things and their Habitats</u> Children will focus on the habitats of animals in the Rainforest	<u>Animals including Humans</u> Children will learn about how we can "be healthy" <u>Seasons:</u> Children will focus on the season of Summer
Year 1	<u>Seasonal Changes</u> Children will learn to observe changes across the four seasons and describe weather associated with the seasons and how day length varies. They will begin their scientific enquiry journey through the classification of leaves.		<u>Seasonal Changes</u> <u>Everyday Materials</u> Children will learn to compare and group together a variety of everyday materials on the basis of their simple physical properties. Children will learn to identify and name objects and the materials from which they are made. They will compare and group materials based on how they look and feel and carry out tests to sort materials based on unobservable properties.	<u>Seasonal Changes</u> <u>Animals including Humans</u> Children will learn to compare and group animals based on their similarities and differences in their characteristics, physical features and diets. They will learn to identify characteristics specific to mammals, birds, reptiles, amphibians and fish and to recall the diets of carnivores, herbivores and omnivores.	<u>Seasonal Changes</u> <u>Plants</u> Children will learn to identify and name a variety of common wild and garden plants including deciduous and evergreen trees and describe the basic structure of a variety of common flowering plants, including tree.	<u>Seasonal Changes</u>
Year 2	<u>Animals including Humans</u> Children will learn to understand through observations and first-hand experiences, the basic needs of animals for survival, as well as the importance of exercise and nutrition for humans. They will compare and describe the life cycle of a human.		<u>Plants</u> Children will use the local environment to observe how plants grow and what they need to grow. Through experiments, they will describe how plants need water, light and a suitable temperature to grow and stay healthy.	<u>Uses of Everyday Materials</u> Children will identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. They will find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	<u>Living Things and their Habitats</u> Children will explore and compare the differences between things that are living, dead, and things that have never been alive. They 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. They will identify and name a variety of plants and animals in their habitats, including microhabitats and 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.	
Year 3	<u>Animals including Humans</u> Children will learn about the human skeleton, identify key bones and explore how muscle changes result in movement. They learn about how the body uses energy, what constitutes a balanced diet in humans and how research contributes to nutritionist expertise.		<u>Rocks</u> Children will learn about the appearance and physical properties of rocks and they will compare and group different rock samples. They learn about how fossils and soils are formed.	<u>Forces and Magnets</u> Children will learn about motion on different surfaces, what friction is and compare its uses and disadvantages. They broaden their experience in working scientifically as they investigate contact and non-contact forces. Pupils explore the properties of different magnets and apply this to understand their uses.	<u>Plants</u> Children will learn about how plants reproduce in the context of the life cycle of a flowering plant, gathering data on plant growth and investigating the structure and function of the parts of a flowering plant.	<u>Light</u> Children will learn about different light sources, that light is needed to see and how its absence causes darkness. Children investigate reflection and shadow formation.
Year 4	<u>Living in Environments</u> Children will learn about the different ways living things can be grouped and make classification keys. They study ways that habitats may change over time and understand that humans can have both positive and negative effects on their surroundings.	<u>Eating and Digestion</u> Children will learn to describe the function of key organs in the digestive system. Pupils identify the types of human teeth and investigate factors that impact our dental health.	<u>States of Matter</u> Children will investigate the properties of solids, liquids and gases and they will learn about the different states of matter. They explore changes of state using relatable examples and use this to explain changes to water through the water cycle.		<u>Sound</u> Children will learn the different ways of producing sounds and the relationship between vibrations and what they hear. Pupils explore how pitch and volume can be altered and how sound can be insulated using different materials.	<u>Electricity</u> Children will learn about appliances in their setting that use electricity, how to work with electricity safely and build circuits. Pupils investigate electrical conductors and insulators and explore the relationship between the number of cells and bulb brightness.
Year 5		<u>Properties and Changes of Materials</u> Children will learn about the different types of mixtures and the different methods that can be used to separate them. They dissolve a range of substances, identify different solutions and investigate how temperature affects	<u>Forces (Science Week)</u> Children will learn about gravity, friction, air resistance and water resistance in more depth and consider the effect of these forces being unbalanced. They plan investigations to further their understanding of the effects of these	<u>Earth and Space</u> Children will learn about the movement of the celestial bodies in our Solar System, including the Earth and other planets and the Moon. They discover how the rotation of the Earth causes night and day and how sundials work. Pupils find out about the uses of satellites and the problem with space junk.	<u>Living Things and their Habitats</u> Children will compare the life cycles of plants, mammals, birds, amphibians and insects. They will investigate asexual reproduction in plants.	<u>Animals including Humans (Linked to PSHE)</u> Children will learn about human development and changes. They describe how puberty affects girls and boys and produce graphs to compare how gestation periods vary across different mammals, including humans.

		the time taken to dissolve. They design and create a water filter, sieve soil and evaporate solutions.	forces. Pupils test their ideas using models and compete to build the most effective pulley system.			
Year 6	<u>Animals including Humans</u> Children will learn about the heart and circulatory system through models and enquiries and consider how lifestyle choices affect our health	<u>Light</u> Children will learn how light travels in straight lines and that this explains observations of shadows and reflection.	<u>Evolution and Inheritance</u> Children will learn about characteristics that are inherited and those that are environmental. Through the eyes of Darwin and Wallace, pupils understand how observations lead to theories. By modelling finches' variation and natural selection, they begin to explain how species evolve and the role of fossil evidence that supports this theory.	<u>Living Things and their Habitats</u> Children will learn who Carl Linnaeus was and how he developed the system of classification of animals. The will learn the difference between Vertebrates and invertebrates and classify Microorganisms	<u>Electricity</u> Children will develop their knowledge of circuits, the effects of changing voltage and how switches contribute to different devices	