Science Intent Statement

Our high quality science curriculum ensures all children are taught essential aspects of the knowledge, methods, processes and uses of science; are encouraged to recognise the power of rational explanation, predict how things will behave, analyse causes, develop an excitement and curiosity about natural phenomena and are equipped with the scientific knowledge required to understand the uses and implications of science today and for the future.

Concepts and Themes (including Big Ideas)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	• 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. • Understand the effect of changing seasons on the natural world around them.					
Year 1	Animals There are a variety of common animals that are birds, fish, amphibians, reptiles and mammals. This includes carnivores, herbivores and omnivores. All animals, including humans, have similarities and differences. One similarity being they change as they grow. Humans are made up of different parts, some of which are associated with the different senses: taste, sight, smell, touch and hearing. Seasons	Animals There are a variety of common animals that are birds, fish, amphibians, reptiles and mammals. This includes carnivores, herbivores and omnivores. All animals, including humans, have similarities and differences. One similarity being they change as they grow. Humans are made up of different parts, some of which are associated with the different senses: taste, sight, smell, touch and hearing. Seasons	Materials There are a variety of different materials in everyday life and these materials all have different properties which can be described and identified. Seasons	Materials There are a variety of different materials in everyday life and these materials all have different properties which can be described and identified.	Plants There are different types of plants which have different features but a common structure.	Seasons Each season has different weather patterns and day length.
Year 2	Materials All materials have different features which make them suitable for particular uses.	Materials All materials have different features which make them suitable for particular uses.	Animals including Humans All animals have a life cycle in which they produce young.	Living things and their habitats All plants and animals need different things to survive and live in various habitats that meet those needs.	Animals including humans Humans grow to become adults and they have certain needs that help them to stay healthy.	Plants Plants grow from a seed or a bulb and they need water, light and nutrients to make them grow.
Year 3	Rocks and Soils There are many different types of rocks and soils which can be identified by their different characteristics. This is caused by the way they are formed and makes them suitable for different uses.	Animals including humans Our bodies are given shape, protected and supported by our skeleton and muscles. By working together they make it possible for us to move. We can keep our skeletons and muscles healthy by considering our diet and activities.	Forces and Magnets Objects move because of forces acting upon them and a force is needed to stop them moving. One such force is magnetism. This is caused by magnetic materials which may cause movement in different ways.	Light Light is needed for us to see but can be dangerous. Different conditions can create shadows or reflect light.	Plants There are many different types of plants. These often share the same features which have different functions for the plant. Plants have a range of requirements for growth and to remain healthy.	Plants There are many different types of plants. These often share the same features which have different functions for the plant. Plants have a range of requirements for growth and to remain healthy.
Year 4	Electricity When switched on, the parts within an electrical circuit need to be made of particular materials and set up in the correct way in order for lamps to light, motors to turn and buzzers to buzz.	Sound In order to hear sound, there needs to be a vibration through matter which travels towards the ear. This allows humans to hear and the strength of the vibration affects the volume.	Living things and their habitats Living things can be grouped by their features, such as in a classification key, which can be used to identify different plants and animals. Living things survive in a habitat that provides a suitable environment for them. But environments can change naturally, or as a result of human impacts, which affects the habitats of those living things.	Living things and their habitats Living things can be grouped by their features, such as in a classification key, which can be used to identify different plants and animals. Living things survive in a habitat that provides a suitable environment for them. But environments can change naturally, or as a result of human impacts, which affects the habitats of those living things.	Animals including Humans In animals, food goes on a journey through the digestive system. Each part of the digestive system has a special job. Some animals eat plants and some eat other animals. This creates food chains.	States of matter A particular material can exist in different states (solid, liquid or gas). In order for a material to change from one state to another certian conditions must exist.
Year 5	Earth and Space The solar system consists of the Earth and Moon and eight planets, orbiting the Sun which is at the centre of the solar system.	Forces There are forces acting on moving objects and these forces produce different effects.	Changes of State Properties of materials can affect their uses such as thermal or electrical conductivity. Materials may be changed by conditions. Some of these changes are reversible and others are irreversible.	Changes of State Properties of materials can affect their uses such as thermal or electrical conductivity. Materials may be changed by conditions. Some of these changes are reversible and others are irreversible.	Plants The different parts of a plant contribute to sexual and asexual reproduction.	Animals including Humans All animals and plants have life cycles which are similar or different to each other in many ways. These may start before birth. These can be compared or contrasted with life cycles of humans.
Year 6	Light We see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. Shadows are formed when a object blocks light.	Electricity Electricity is a form of energy which flows through a complete circuit and is affected by the components involved.	Evolution and inheritance Living things have changed over time and animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	Living things and their habitats Micro-organisms, plants and animals are classified in different groups based on their specific characteristics	Animals including humans The human circulatory system has several main parts which have different names and functions. This includes the heart, blood vessels and blood.	Animals including humans The human circulatory system has several main parts which have different names and functions. This includes the heart, blood vessels and blood.