Long Term Plan: Science
Key Stage 2 / Year 4

Autumn	Spring	Summer
Living Things and Their Habitats Pupils sort living things in a variety of ways, for example by their animal groups (mammals, fish, birds, reptiles, amphibians and insects), or according to whether they are vertebrates or invertebrates. Pupils sort using Venn diagrams, Carroll diagrams and classification keys. They also consider how changes to the environment can lead to a species becoming endangered.	**States of Matter (Materials)** Pupils compare and group materials together according to whether they are solids, liquids or gases and conduct an experiment to find out if gas weighs anything. Pupils observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).	**Sound** Pupils identify how sounds are made, associating some of them with something vibrating and recognising that vibrations from sounds travel through a medium to the ear. They find patterns between the pitch of a sound and features of the object that produced it and patterns between the volume of a sound and the strength of the vibrations that produced it. Pupils also explore the idea that sounds get fainter as the distance from the sound source increases.
Animals including humans (food chains) Pupils learn about the simple functions of the basic parts of the digestive system in humans. They identify the different types of teeth in humans, how to look after them and their simple functions. Pupils also construct and interpret a variety of food chains identifying producers, predators and prey.	**States of Matter (The Water Cycle)** Pupils identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	**Electricity** Pupils identify common appliances that run on electricity. They are given the opportunity to construct a simple electrical circuit, identifying and naming its basic parts including cells, wires, bulbs, switches and buzzers. Pupils study different circuits to identify whether or not a lamp lights in a simple circuit based on whether or not the lamp is part of a complete loop with a battery, and recognise that a switch opens and closes a circuit. They also recognise some common conductors and insulators, and associate metals with being good conductors.