Science

Year 1	Autumn 1 Seasonal Changes Autumn	Autumn 2 Everyday Materials	Spring 1 Seasonal Changes Spring	Spring 2 Animals including humans	Summer 1 Seasonal Changes Summer	Summer 2 Plants
	• To describe how the weather changes across the seasons. • To observe and describe how day length varies in the different seasons. • To observe and describe the weather in autumn/winter. • To collect and record data about the weather in autumn/winter. • To identify signs of autumn. • To identify changes in the trees and in clothes that we wear from autumn to winter. • To explain how some animals adapt in autumn/winter.	• To identify and name different materials. • To tell the difference between an object and the materials it is made from. • To describe the properties of everyday materials. • To compare and group together a variety of everyday materials. • To investigate the properties of different materials. • To investigate the properties of different fabrics.	• To describe how the weather changes across the seasons. • To observe and describe how day length varies in the different seasons. • To observe and describe the weather in winter/spring. • To collect and record data about the weather in winter/spring. • To identify signs of winter/spring. • To identify changes in the trees and in clothes that we wear from winter to spring. • To explain how some animals adapt in winter/spring.	• To identify and name some common animals. • To describe and compare the structure of a variety of common animals. • To identify, name and sort animals that are herbivores, carnivores and omnivores. • To name and label the parts of the human body. • To name the five senses and to perform simple tests to find out more about them. • To compare the similarities and differences within humans.	• To describe how the weather changes across the seasons. • To observe and describe how day length varies in the different seasons. • To observe and describe the weather in spring/summer. • To collect and record data about the weather in spring/summer. • To identify signs of spring/summer. • To identify changes in the trees and in clothes that we wear from spring to summer. • To explain how some animals adapt in spring/summer.	• To understand what a plant is. • To name and compare the parts of plants. • To identify and name some common garden and wild plants. • To identify and name some common trees. • To name, sort and compare some common fruit and vegetable plants. • To name and compare some common plants and trees.

Year 2		**Uses of everyday materials** • To identify uses of different everyday materials. • To group the uses of everyday materials. • To compare the suitability of different everyday materials. • To explain how the shapes of objects made from some materials can be changed. • To explain the process of recycling. • To research the inventor John McAdam.	• **Animals including humans** • To match, sort and group young animals and their adults. • To find out how animals change as they grow into adults. • To compare the stages of the human life cycle. • To research and describe what animals, including humans, need to survive. • To test the effects of exercise on the human body. • To investigate the importance of healthy eating and hygiene.	**Living things and their habitats** • To compare the differences between things that are living, dead and have never been alive. • To identify and name a variety of plants and animals in their habitats. • To identify and name a variety of plants and animals in their microhabitats. • To describe a habitat and identify animals live in it • To identify how an animal is suited to its habitat. • To describe how animals get their food by using food chains.		**Plants** • To design and set up a test to find out what plants need to stay healthy. • To observe and describe how seeds and bulbs grow into mature plants. • To describe the life cycle of a plant. • To explain what plants need to grow and stay healthy. • To describe what happens if plants don't get all the things they need. • To explain how plants are suited to their habitats.

Year 3	Forces and Magnets	Rocks	Light	Animals including humans		Plants
	• To identify the forces acting on objects. • To compare how things move on different surfaces. • To compare and group materials according to whether they are magnetic. • To investigate the strength of magnets. • Understand how magnetic forces work. • To explore magnetic poles.	• To compare different kinds of rocks based on their appearance. • To compare different kinds of rocks based on their physical properties. • To explain how rocks are formed. • To explain how fossils are formed. • To explain Mary Anning's contribution to palaeontology. • To understand how soil is formed. • To investigate the permeability of different soils	• To recognise that I need light to see things, and that dark is the absence of light. • To investigate which surfaces reflect light. • To use a mirror to reflect light and explain how mirrors work. • To recognise that light from the sun can be dangerous and that there are ways to protect our eyes. • To investigate which materials block light to form shadows. • To find patterns when investigating how shadows change size.	• To sort foods into food groups and find out about the nutrients that different foods provide. • To explore the nutritional values of different foods by gathering information from food labels. • To label the bones in our body and understand the importance of our skeleton. • To label the muscles in our body and understand the jobs of our muscles. • To investigate if there is a link between the length of bones and mass of muscle.		• To name the different parts of flowering plants and explain their jobs. • To investigate what plants need to grow well. • To investigate how water is transported in plants. • To name the different parts of a flower and explain their role in pollination and fertilisation. • To understand and order the stages of the life cycle of a flowering plant.

Year 4	Sound	Electricity	States of Matter	Animals including Humans		Living things and their habitats
	• To describe different sound sources and explain how sound is made. • To explain how different sounds travel. • To explore ways to change the pitch of a sound. • To investigate ways to absorb sound. • To make a musical instrument to play different sounds.	• To identify common appliances that run on electricity. • To identify circuit components and build working circuits. • To investigate whether circuits are complete or incomplete. • To investigate which materials are electrical conductors or insulators. • To explain how a switch works in a circuit, build switches and report my findings.	• To compare and group materials together, according to whether they are solids, liquids or gases. • To investigate the properties of liquids. • To investigate gases and explain their properties. • To investigate materials as they change state. • To investigate how water evaporates. • To identify and describe the different stages of the water cycle	• To label the different parts of the digestive system. • To describe the simple functions of the basic parts of the digestive system in humans. 2 lessons on this. • To identify the different types of teeth in humans and their simple functions. • To understand what causes tooth decay by conducting a fair test. • To construct and interpret a variety of food chains, identifying producers, predators and prey.		• To use a range of methods to sort living things. • To identify vertebrates by observing their similarities and differences. • To use a key to identify invertebrates. • To create a classification key. • To recognise positive and negative changes to the local environment. • To describe environmental dangers to endangered species.

Year 5	**Earth and Space** • To describe the planets in the solar system. • To describe the sun, Earth and moon as approximately spherical bodies. • To explain the movement of the Earth and other planets relative to the Sun in the solar system. • To describe the movement of the Moon relative to the Earth. • To explain day and night and the apparent movement of the sun across the sky. • investigate night and day in different parts of the Earth. • To explain the movement of the Moon.	**Forces** • To identify forces acting on objects. • To explore the effect gravity has on objects and how gravity was discovered. • To investigate the effects of air resistance. • To explore the effects of water resistance. • To investigate the effects of friction. • To recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	**Properties and Changes of materials** • To compare materials according to their properties. • To investigate thermal conductors and insulators. • To investigate which electrical conductors make a bulb shine brightest. • To investigate materials which will dissolve. • To use different processes to separate mixtures of materials. • To identify and explain irreversible chemical changes.	**Animals including humans** • To describe the stages of human development. • To explain how babies grow and develop. • To describe and explain the main changes that occur during puberty. • To identify the changes that take place in old age. • To compare and investigate the gestation periods for different animals. • To explore the relationship between the length of the gestation period of an animal and their life expectancy.		**Living things and their habitats** • To dissect a plant (lily) and label the reproductive organs. • To describe how some plants reproduce. • To describe the life cycles of different mammals. • To explain what Jane Goodall discovered about chimpanzees. • To compare the life cycles of amphibians and insects. • To compare the life cycles of plants, mammals, amphibians, insects and birds.

Year 6	Evolution and Inheritance	Electricity	Light	Animals including humans		Living things and their habitats
	• To explain how humans change as they get older. (recap) • To explain the scientific concept of inheritance. • To identify how plants are adapted to suit their environment in different ways. • To identify how animals are adapted to suit their environment in different ways. • To understand how adaptation may lead to evolution- natural selection. • To research the scientist Charles Darwin. • To identify evidence for evolution from fossil records. • To understand how human beings have evolved.	• To explain the importance of the major discoveries in electricity. • To understand the meaning of different circuit symbols. • To observe and explain the effects of differing volts in a circuit. • To investigate the relationship between wire length and the brightness of bulbs or the loudness of buzzers. • To understand what renewable and non-renewable energy sources are.	• To explain that light travels in straight lines from light sources to our eyes, and from light sources to objects and then to our eyes. • To understand how mirrors reflect light, and how they can help us see objects. • To investigate how refraction changes the direction in which light travels. • To investigate how a prism changes a ray of light. • To investigate how light enables us to see colours. • To explain why shadows have the same shape as the object that casts them.	• To understand the three main parts of the circulatory system and describe the job of the heart. • To describe the important jobs of the blood vessels and blood. • To describe the importance of exercise and how it affects the heart. • To understand that regular exercise is important for a healthy body. • To recognise the impact of drugs and alcohol on the way bodies function.		• To give reasons for classifying animals based on their similarities and differences. • To begin to understand that animals can be grouped and classified using the Linnaean system. • To identify the characteristics of different types of animals. • To describe and investigate helpful and harmful microorganisms. • To identify the characteristics of different types of microorganisms. • To understand how to classify plants. • To classify organisms found in my local habitat.