

YEAR	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	<u>Animals Including Humans</u> <ul style="list-style-type: none"> To understand that humans have bodies with similar parts - name and label them. To know some differences between humans: Eye colour Height Hair colour Skin colour Facial features To know we have 5 senses to find out about the world Sight - to see Hearing-to hear Touch- to feel Taste - to taste Smell - to smell To know and be able to identify different types of animals: Mammals, birds, reptiles and amphibians To know how to sort animals into groups. To name some animals in our local environment. 		<u>Everyday materials</u> <ul style="list-style-type: none"> To understand that objects are made from materials which have properties that can be recognised and named. To sort and group materials. To test materials for waterproofing. To identify magnetic objects by using a magnet to detect. To test and record observations - explain what happens. 	<u>Seasonal changes</u> <ul style="list-style-type: none"> To find facts about the sun. To observe that sun appears to move across the sky. To describe shadows as patches of darkness. To explain that shadows change in length and position during the day. To describe the weather, measure aspects, record weather. To name the four seasons. To put the months into seasons. To describe each season. 	<u>Plants</u> <ul style="list-style-type: none"> To discover what plants need to survive. To identify plants found in the immediate/local area. To understand that plants are different to humans and animals. To label the basic parts of a plant. To describe the differences between wild and garden plants- identify and name varieties of garden and wild plants. To understand deciduous trees and evergreen trees. 	
	Year 2	<u>Animals Including Humans</u> <ul style="list-style-type: none"> To know what are the basic needs of animals, including humans, for survival: Water Food Air Warmth To know that exercise is important to humans to keep them healthy. To know that animals, including humans, have offspring which grow into adults. To know about the importance of hygiene for humans. 	<u>Uses of everyday materials</u> <ul style="list-style-type: none"> To identify and discuss a range of materials. Closely observe, test and compare a variety of materials. To sort materials according to their properties, and label materials used for different purposes. To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. 	<u>Living things and their habitats.</u> <ul style="list-style-type: none"> To explore and compare differences between things that are living, dead and never been alive. To sort and classify according to criteria. To identify and name a variety of plants and animals in their habitats including micro-habitats. To describe how animals obtain food from plants and other animals. Create simple food chains including sources of food. To understand that most living things live in habitats they are suited to. To understand different habitats provide for basic needs of plants and animals and how they depend on each other. 		<u>Plants</u> <ul style="list-style-type: none"> To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. To observe how bulbs/seeds grow into adult plants. To set up comparative tests, observe, record and conclude.

	<ul style="list-style-type: none"> To know about the importance of eating balanced amounts of different types of food. 	<ul style="list-style-type: none"> To know some materials are used for many things- observe, test and compare a variety of materials. To investigate how shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 			
<p style="text-align: center;">Year 3</p>	<p><u>Animals Including Humans</u></p> <ul style="list-style-type: none"> To know what animals including Humans need to stay healthy: To know that animals including humans cannot make their own food and they get nutrition from what they eat. To know the different food groups. To know what is meant by a 'balanced diet' in terms of the food groups. To know why some people have particular dietary needs. Lactose intolerant Allergies (e.g. nut, strawberry) Gluten intolerance To know the main functions of the skeleton: To know that many different animals have similar but different skeletons. To know that an adult human has approximately 206 bones. 	<p style="text-align: center;"><u>Light</u></p> <ul style="list-style-type: none"> To identify sources of light and know that we need light to see. To understand that darkness is an absence of light. To know that we can see things because light bounces off them. To know that some things only reflect light and they are not a light source. To explain how a mirror works. To understand the terms 'opaque', 'translucent' and 'transparent'. To understand the importance of transparency of a material in its use. 	<p style="text-align: center;"><u>Forces</u></p> <ul style="list-style-type: none"> To understand that a force is a push, pull or twist and it can make objects speed up, slow down, change direction or stop. To recognise that forces act in a particular direction. To understand that lodestone is a natural magnet and that Earth can act like a gigantic bar magnet. To name the 4 (8) main points of a compass. To understand magnetic/non-magnetic and that not all metals are magnetic. To understand terms 'attract' and 'repel'. To suggest ways in which a magnet could be used. 	<p style="text-align: center;"><u>Plants</u></p> <ul style="list-style-type: none"> To name the main parts of a plant. To describe the function of roots and plant stems. To know the 7 different life processes. To begin to understand photosynthesis is the process by which plants make their food. To understand that there are nutrients in the soil. To name parts of a flower and explain the life cycle of a flowering plant. To understand the importance of seed dispersal and ways it can happen. Tests, observations and conclusions 	<p style="text-align: center;"><u>Rocks</u></p> <ul style="list-style-type: none"> To identify where rocks have been used in and around school. To understand how rocks are useful. To explore characteristics of different rocks. To explore rocks further and recognise differences between rocks. To understand what fossils are and how they are formed. To investigate soil.

<p>Year 4</p>	<p><u>Animals Including Humans</u></p> <ul style="list-style-type: none"> Know the simple functions of the basic parts of the digestive system in humans: <ul style="list-style-type: none"> Mouth - break food in to smaller parts - ingest Esophagus - transport food to the stomach Stomach - food chemically broken down Small intestine - further chemical break down and absorb nutrients Large intestine (colon) - absorbs water and solidifies the waste product Anus - expels waste product. Make a model of the digestive system. Explain different diets of carnivores, herbivores and omnivores. Identify the different types of teeth in humans and their simple functions and explain the importance of cleaning your teeth. Define predator, prey and producer. Make links between plants and animals in the form of food chains and understand what an energy chain is. 		<p><u>Electricity</u></p> <ul style="list-style-type: none"> Identify common appliances that run on electricity - either mains and batteries (or both). Construct a simple series electrical circuit Recognise some common conductors and insulators, and associate metals with being good conductors Wire a plug. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit <p>Write a fact file or a biography about a scientist who helped our understanding of electricity.</p>	<p><u>Living things and their habitats</u></p> <ul style="list-style-type: none"> Identify that living things live in a variety of habitats to which they are suited. Recognise that living things can be grouped in a variety of ways Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment Recognise that environments can change and that this can sometimes pose dangers to living things Describe how human activity can affect habitats <p>Explain how habitats can be changed deliberately</p>	<p><u>States of Matter</u></p> <ul style="list-style-type: none"> Compare and group materials together, according to whether they are solids, liquids or gases Identify that some materials change state when they are heated or cooled. Measure or research the temperature at which this happens in degrees Celsius. Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. <p>Identify differences, similarities or changes related to simple scientific ideas and processes</p>	<p><u>Sound</u></p> <ul style="list-style-type: none"> How are sounds made? Associate some of them with something vibrating Sounds get fainter as the distance from the sound source increases Recognise that vibrations from sounds travel through a medium to the ear Find patterns between the volume of a sound and the strength of the vibrations that produced it <p>Find patterns between the pitch of a sound and features of the object that produced it</p>
	<p>Year 5</p>	<p><u>Forces</u></p> <ul style="list-style-type: none"> To know what a force is and understand the differences between balanced and unbalanced forces. To be able to explore gravity, who discovered it and how it can be measured. To understand the relationship between mass and gravity. To be able to explain what friction is and what effect it has on moving objects. To be able to understand what air resistance and its effect upon moving objects. To understand what water resistance is and its effect upon moving objects. To know how magnets work and identify magnetic objects. 	<p><u>Materials</u></p> <ul style="list-style-type: none"> To know what a material is. To be able to categorise materials into solids, liquids and gases. To know how particles in materials behave. I understand how liquids evaporate. Conduct an experiment. To know what condensation is. To be able to identify irreversible and reversible changes. To understand what is meant by dissolving 	<p><u>Earth and Space</u></p> <ul style="list-style-type: none"> To understand the arguments for and against a spherical world. To name and describe features of the planets in our solar system. I understand how the planets in our solar system move. I understand how night and day occurs. I know that night and day does not occur at the same time all over the world. I understand how the moon moves. I know the phases of the moon. 	<p><u>Animals Including Humans</u></p> <ul style="list-style-type: none"> To describe the changes as humans develop to old age. To be able to order the stages of a human life cycle. I know the gestation period of some animals. To be able to conduct an investigation. I understand how to be hygienic. 	<p><u>Living things and their habitats</u></p> <ul style="list-style-type: none"> To describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. To describe the life process of reproduction in some plants and animals.

Evolution and Inheritance

- To recognise and understand the story of creation.
- To recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.
- To recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Begin to learn about DNA and genes.
- To identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
- To understand how Charles Darwin and Alfred Wallace developed their ideas on evolution and to understand the theory of natural selection.
- To investigate and know about the work of palaeontologists (i.e. Mary Anning)

Living things and their habitats

- To recognise and understand the theory of classification and to recognise and understand the term 'taxonomy'.
- To recognise that living things are grouped into different kingdoms and explain the six different kingdoms of the living world.
- To recognise that living things can be found in a variety of habitats and understand the variety of habitats. To identify living things from different habitats.
- To understand the terms invertebrates and vertebrates. To be able to group animals into invertebrates and vertebrates and explain why they are in each group.
- To understand and explain how Carolus Linnaeus developed the theory of taxonomy.

Electricity

- To revise knowledge of electricity.
- To be able to draw a diagram of a working circuit using standard scientific symbols.
- To be able to examine a circuit diagram and explain how they know whether it will work.
- To be able to decide how to investigate changes to circuits when different devices are added, or some of the wire is made thinner than the connecting wire.
- To predict effects of the changes and compare their predictions with their findings.
- To be able to recognise patterns in the results and make general statements on the basis of these and suggest explanations for the effects of changes.
- To be able to understand that wires are usually covered with plastic because plastic is an insulator.
- To understand how to stay safe when working with and using electricity.

Animals Including Humans

- To recap and describe the ways in which nutrients and water are transported within animals, including humans.
- To explain which foods provide energy for activity, which foods contain large amounts of sugar and fat and understand that fruit and vegetables are vital to maintain good health.
- To know the names of and summarise the major systems of the human body (nervous, digestive, and circulatory).
- To know about the circulatory system - heart, lungs, blood. To learn about and summarise the functions of arteries and veins.
- To understand that the heart acts as a pump for blood and learn about the links between heartbeat and pulse rate.
- To be able to locate, collect data and find averages of pulse rates. To represent data about pulse rates in a line graph and interpret it (by answering questions).
- To be able to understand and then explain what the word 'drug' means. To understand that drugs can help and harm you. To understand the content of a cigarette and consider the possible effects of smoking.
- To evaluate and summarise what we can do to keep our bodies healthy.

Revision

- To recognise and understand the movement of the Earth, Sun and Moon.
- To be able to identify, understand and explain a variety of forces.
- To recognise and understand the stages of the human life cycle.
- To explain a healthy lifestyle for humans.
- To be able to identify, understand and explain the Water Cycle.
- To recognise and understand the components of a complete circuit.
- To create, draw and label a circuit diagram.
- To identify, understand and explain how a magnet works.
- To be able to identify a variety of light sources (natural/man-made).
- To explain how light is reflected/refracted and how shadows are formed.
- To be able to identify a variety of sound sources (natural/man-made).

Light and how we see things

- To recognise that light travels from a light source in straight lines.
- To be able to explain and summarise that they can see a light source when light from it enters their eyes.
- To investigate how light travels from a light source and can be blocked by an opaque object creating shadows.
- To investigate and explain that shiny surfaces reflect light better than dull surfaces.
- To identify differences between shadows and reflections.
- To explain that mirrors can reflect light and change the direction in which a light beam is travelling. To draw diagrams to show how the angle of reflection of a light beam changes when the angle at which light hits the mirror is changed.

					<ul style="list-style-type: none">• To explain how light is created, changed and how it travels.• To understand and explain solids, liquids and gases.• To explain the processes of changing state.	
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