

Year 2 Knowledge Objectives and Knowledge Goals – SCIENCE

	The Human Body	Living Things and their Environments	Electricity	Plants	Materials and Matter	Astronomy
Week 1	<p><i>Animals, including humans, need air, food and water to survive</i></p> <p>Animals need water, food and air to survive</p> <p>When water, food or air is scarce, humans and animals suffer</p> <p>When animals, including humans, have water, food and air, they can have offspring that grow into adults</p>	<p><i>To know the differences between living, dead and never been alive</i></p> <p>Living things move, grow, need air and reproduce</p> <p>Dead things were once alive, but are no longer alive</p> <p>Inanimate things have never lived; for example a rock</p>	<p><i>To identify things that use electricity</i></p> <p>Many things around us use electricity to make them work</p> <p>Electricity is an energy that we can store or use to make things work</p> <p>Electricity can be very useful but can also be dangerous</p>	<p><i>To know there are many different kinds of plants</i></p> <p>There are many different kinds of plants</p> <p>Around my school I can find plants such as:</p> <p>Around my school I can find trees such as: (complete depending on your environment)</p>	<p><i>To know that materials have specific uses based on their properties</i></p> <p>Everyday materials include plastic, fabric, wood, paper, metal and glass</p> <p>Every material has its own properties, these can include being hard, soft, opaque, shiny, bendy</p> <p>Materials are used for a purpose depending on their properties</p>	<p><i>To know there are eight planets in our solar system</i></p> <p>The Sun is a star at the centre of our solar system</p> <p>There are eight planets in our solar system</p> <p>The planets are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune</p>
Week 2	<p><i>To know that our skeleton and our muscles help us to move</i></p> <p>Animals need water, food and air to survive</p> <p>Our skeleton is made up of bones inside our body</p> <p>Our muscles help us to move</p> <p>Exercise is an important way of keeping our body healthy</p>	<p><i>To know that a habitat is the name given to a place where plants or animals live</i></p> <p>A habitat is the name given to a place where plants or animals live</p> <p>In a woodland habitat we might see: oak trees, ferns, mosses, beetles, foxes and squirrels</p> <p>In a desert habitat we might see: camels, scorpions, rattlesnakes, cacti and tumbleweed</p>	<p><i>To know that electricity is useful, but it can also be dangerous</i></p> <p>Electricity can be very dangerous</p> <p>We must use electricity safely to make sure it is not a danger to us</p> <p>We can use electricity safely by; not putting fingers in plug sockets, not using electrical items with wet hands and checking that wires are not frayed</p>	<p><i>Seeds and bulbs grow into mature plants</i></p> <p>A seed can grow into a flowering plant</p> <p>When a seed germinates, it changes from a seed into a seedling</p> <p>Some plants create bulbs that live underground, and their leaves grow up through the soil</p>	<p><i>To know that inventors think carefully about materials and their properties</i></p> <p>Inventors need to think about the best materials to use for their inventions</p> <p>Scientists and engineers can work for many years on a project before they have success</p> <p>Velcro was made to help join two fabrics together</p>	<p><i>To know that Earth travels around the sun</i></p> <p>Planets travel around the Sun</p> <p>We call this journey an orbit. As the planets orbit the Sun, they also spin around</p> <p>We call this rotation</p> <p>Night and day occur due to the Earth rotating</p>
Week 3	<p><i>To understand that our bodies digest our food</i></p> <p>Digestion means breaking down the food we eat</p> <p>Our bodies take things we need out of the food we eat</p> <p>It is important to feed our bodies with healthy foods</p>	<p><i>To describe rainforests are hot and moist, and deserts as dry and hot or cold. To know that each habitat has plants and animals adapted to survive</i></p> <p>Some animals and plants that might be found in rainforests are banana trees, orchids, monkeys and parrots</p> <p>Deserts are very dry, whether hot or cold, and plants and animals have adapted to survive</p>	<p><i>To construct an electrical circuit</i></p> <p>An electrical circuit is a loop that allows electricity to travel around it</p> <p>An electrical circuit must have wires and a battery</p> <p>If a circuit is broken, electricity will not be able to flow around it</p>	<p><i>Healthy plants need light and water to grow</i></p> <p>When a plant has no water, it cannot grow well</p> <p>When a plant has no light, it cannot grow well</p> <p>Plants often grow well in the Spring as the temperatures get warmer and there is often rain</p>	<p><i>To know that scientists use microscopes to see very small things around us</i></p> <p>Scientists use a microscope to look closely at very small things</p> <p>Sometimes, materials look very different when we look at them using a microscope</p> <p>Everything around us is made from tiny building blocks we cannot see called atoms</p>	<p><i>To know that the moon orbits the earth</i></p> <p>The Moon orbits the earth</p> <p>The moon reflects the light of the sun</p> <p>As the Moon's position changes, we can see different parts of it</p>

Year 2 Knowledge Objectives and Knowledge Goals – SCIENCE

<p>Week 4</p>	<p><i>To know that our heart pumps blood around our body</i></p> <p>The heart is a muscle inside our body</p> <p>The heart pumps blood around our body</p> <p>Our blood circulates around our body, which means it goes around and around</p>	<p><i>To name and describe animals who live in underground habitats</i></p> <p>Some animals live in underground habitats</p> <p>Animals that live in underground habitats include badgers, moles, foxes, rabbits and worms</p> <p>These animals have adapted to living underground</p>			<p><i>To know that the shapes of solid objects made from some materials can be changed</i></p> <p>Solids have a definite shape</p> <p>The shape of some solids can be changed by squashing, bending, twisting and stretching</p> <p>The atoms in a solid are tightly packed together and have a strong bond</p>	<p><i>To know that groups of stars are called constellations</i></p> <p>A constellation is a group of stars that, when seen from Earth, form a pattern</p> <p>People have given constellations names and have told stories that imagine how the constellations were formed</p> <p>Astronomers have studied the stars for many years, learning from each other and making new discoveries</p>
<p>Week 5</p>	<p><i>To understand that scientists have found ways to keep us healthy</i></p> <p>We need to take care of our bodies through exercising, keeping clean, eating a balanced diet and resting</p> <p>Germes can make us unwell. Scientists have found ways to help us stay healthy</p>	<p><i>To know that a food chain describes ‘who eats what’ within a habitat</i></p> <p>A food chain describes ‘who eats what’ within a habitat</p> <p>Green plants make their own food; we call these plants producers</p> <p>Animals who eat plants, or other animals, are called consumers</p>	<p><i>To identify materials that conduct electricity</i></p> <p>Materials that allow electricity to pass through them are conductors</p> <p>Materials that do not allow electricity to pass through them are insulators</p> <p>Many, but not all metals conduct electricity</p>	<p><i>To understand that plants are grown for food</i></p> <p>Some plants are grown for food</p> <p>Farmers grow crops for food</p> <p>Crops are harvested, packaged and transported for people to buy and eat</p>	<p><i>To understand that water can be a solid and can also be a liquid</i></p> <p>Liquids can be poured</p> <p>The shape of a liquid depends on the container it is being held in</p> <p>Water can be a solid and can also be a liquid.</p>	<p><i>Scientists, including astronomers, learn from each other to make new discoveries about space</i></p> <p>Scientists, including astronomers, study space to find out more about what lies beyond our planet</p> <p>The International Space Station orbits earth and allows scientists to find out more about space</p> <p>Scientists have sent a rover to Mars to look for signs of life long ago</p>

Year 2 Knowledge Objectives and Knowledge Goals – SCIENCE

<p style="text-align: center;">ASSESSMENT</p>	<p><i>I can collect data to answer this question:</i></p> <p>Scientific knowledge and understanding:</p> <ul style="list-style-type: none"> • Our bodies, including our muscles and bones, need exercise to stay healthy • Our digestive system takes nutrients from food to help us stay healthy • Keeping clean stops germs from spreading and keeps us healthy 	<p><i>To know what a habitat is, and give examples of different habitats and how animals and plants are adapted to living in them</i></p> <p>Scientific knowledge and understanding:</p> <ul style="list-style-type: none"> • I can name and identify a number of plants and animals, and their habitats • I understand that habitats provide for the basic needs of the plants and animals that live there • I understand that animals and plants are well suited to their habitats 	<p><i>Pupils should be able to:</i></p> <ul style="list-style-type: none"> • Identify electrical appliances • Explain how to ensure we are using electricity safely • Know how to make a simple circuit • Identify electrical conductors and insulators. • Scientific Understanding: Electricity is an energy that we can store or use to make things work • An electrical circuit is a wire loop that allows electricity to travel around it. 	<p><i>Describe how seeds and bulbs grow into mature plants</i></p> <ul style="list-style-type: none"> • To be able to observe and describe how seeds and bulbs grow into mature plants • To find out and describe how plants need water, light and a suitable temperature to stay healthy. 	<p><i>To be able to describe different materials and their properties</i></p> <ul style="list-style-type: none"> • The materials used around us have different properties • Solids have a definite shape, we can change the shape of some solids by bending and squashing • Liquids flow freely 	<p><i>To show understanding of our Solar System</i></p> <ul style="list-style-type: none"> • To know about the planets in our solar system • To know that Earth travels around the sun • To know that the moon orbits the earth • To be able to describe and name some constellations • To know that scientists explore space
--	---	--	---	---	---	---