

Unlocking Every Child's Potential as a Unique Child of God

Year 1 SCIENCE Curriculum

Term 1 - Toy Story	Term 2 – Pirate Adventure	Term 3- Enchanted Woodland
<p>Everyday materials</p> <ul style="list-style-type: none"> • distinguish between an object and the material from which it is made • identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock • describe the simple physical properties of a variety of everyday materials • compare and group together a variety of everyday materials on the basis of their simple physical properties 	<p>Seasonal Changes</p> <ul style="list-style-type: none"> • observe changes across the 4 seasons • observe and describe weather associated with the seasons and how day length varies. • How have animals adapted to survive winter? • 	<p>Plants</p> <ul style="list-style-type: none"> • identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • identify and describe the basic structure of a variety of common flowering plants, including trees <p>Animals including humans</p> <ul style="list-style-type: none"> • identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammals • identify and name a variety of common animals that are carnivores, herbivores and omnivores • describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) • identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.
<p>Key Vocab: material, property, test, object, test, predict, group, compare, contrast, identify,</p>	<p>Key Vocab: Season, weather, observe, describe, day, compare, autumn, winter, spring, summer, data, temperature, rainfall, wind,</p>	<p>Key Vocab: Sense, animals, human, body, flowering plant, herbivore, omnivore, carnivore, reptile, bird, mammal, fish, amphibian,</p>
<p>Curriculum Enhancement: Experiments to see how they can keep teddy dry?</p>	<p>Curriculum Enhancement: Walk to find signs of spring Experiments for weather (rainfall, wind strength etc)</p>	<p>Curriculum Enhancement: Plant seeds to grow over the term (sunflowers, radishes etc)</p>
<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • Identify and name everyday materials. • Describe simple properties of everyday materials. • To observe closely. • Sort objects 2/3 ways. • Distinguish between an object and the material it is made from. • Describe and compare the properties of everyday materials. 	<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • name the four seasons • name different types of weather • make observations about the weather • describe the weather associated which each season • collect and record simple data • make simple observations about changes across the seasons • name an event or occasion which happens in each season • describe how day length varies between two seasons 	<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • name some plants and trees we have on school grounds and they may have at home (daffodil, tulip, primrose, oak, willow, etc) • Understand and explain difference between deciduous and evergreen trees. • Label the parts of a flowering plant and explain their job • Classify animals • Know which are carnivore, herbivore and omnivore • Children can name the five senses and the part of the body they are related to. Children can explain how they use each of their senses and how they keep them safe • Children can name and locate parts of the human body and begin to make suggestions about what some parts of the body do.

Year 2 SCIENCE Curriculum

Working Scientifically: During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions.

Term 1 - Memory Box	Term 2 – Adventures of Paddington Bear	Term 3- Roots and Shoots
<p>Animals including humans</p> <ul style="list-style-type: none"> • notice that animals, including humans, have offspring which grow into adults • find out about and describe the basic needs of animals, including humans, for survival (water, food and air) • describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene 	<p>Uses of everyday materials</p> <ul style="list-style-type: none"> • identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for different uses • compare how things move on different surfaces. • find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching 	<p>Living things and their habitats</p> <ul style="list-style-type: none"> • explore and compare the differences between things that are living, dead, and things that have never been alive • identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other • identify and name a variety of plants and animals in their habitats, including microhabitats • describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. <p>Plants</p> <ul style="list-style-type: none"> • observe and describe how seeds and bulbs grow into mature plants • find out and describe how plants need water, light and a suitable temperature to grow and stay healthy
<p>Key Vocab: Living, dead, never alive, habitats, food, adult, baby, offspring, needs, healthy, survival, exercise, hygiene,</p>	<p>Key Vocab: Identify, compare, material, friction, surface, object, squashing, bending, twisting and stretching</p>	<p>Key Vocab: Living, habitat, suited, animal, plant, microhabitat, food chain, source</p>
<p>Curriculum Enhancement: Photos of them as babies and now. Family trees?</p>	<p>Curriculum Enhancement: Recycle items in the class Make something new from recycled items?</p>	<p>Curriculum Enhancement: Planting experiment Plant bulbs and seeds (bulbs at end of autumn)</p>
<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • Children can identify and match several animal offspring and their adult forms. They can describe the main characteristics of the offspring found in different animal groups. • Children can describe the main stages of at least two different animal life cycles. They start to compare these life cycles. • Children can identify several ways that humans grow and develop through each life cycle stage. • Children can name the three basic needs of all animals to survive. They can describe the specific needs of a given animal. • Children can describe the effects of exercise and begin to explain the importance of exercise for the human body. • Children can identify several foods according to the basic food groups and can talk about the importance of a balanced diet. They can explain how to be hygienic and why this is important. 	<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • Identify and name everyday materials. • Identify different uses of everyday materials. • Record their observations. • Demonstrate and explain how shapes of objects made from some materials can be changed. • Explain what recycling means • Compare the uses of different everyday materials. • Compare the suitability of different everyday materials. • Explain the advantages of recycling 	<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • Say what is different about things that are living, dead or have never been alive. • Identify some of the plants and animals in a familiar habitat. • Sort objects into categories. • Find microhabitats. • Describe the conditions in a habitat. • Ask questions about different habitats. • Describe the characteristics of some plants and animals. • Name some sources of food. • Draw a simple food chain.

Year 3 Science Curriculum

NC objectives:

During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

Term 1 - Where's Wally?	Term 2 – Funny Bones	Term 3- Ancient Egypt
<p>Pupils will learn:</p> <p>Plants</p> <ul style="list-style-type: none"> • To know about the parts and functions of a <u>flowering</u> plant • Requirements of plants for life and that these vary from plant to plant • Water transportation within plants (<i>set up experiment</i>) • Life cycle of flowering plants – pollination, seeds and dispersal <p>Sound</p> <ul style="list-style-type: none"> • To know how sounds are made – associate some with vibrating • Vibrations form sounds that travel through a medium to the ear • Patterns between pitch of a sound and features of the object that produced it • Patterns between volume of a sound and the strength of the vibration that produced it • Know that sounds get fainter as the distance from the sound increases 	<p>Pupils will learn:</p> <p>Rocks and Soils</p> <ul style="list-style-type: none"> • Compare and group kinds of rocks, looking at appearance and physical properties • Name rock types and explain how they were formed using vocabulary sedimentary, metamorphic and igneous. • how fossils are formed • Recognise that soils are made from rocks and organic matter (layered) • Understand that soils can be a habitat (earthworm, moles etc) (<i>set up experiment</i>) <p>Animals in Humans</p> <ul style="list-style-type: none"> • Identify that animals need the right type and amount of nutrition – they cannot make their own food. • Identify that animals have skeletons and muscles for support, protection and movement • Identify teeth and functions in humans and animals • Describe simple functions of basic parts of the human digestive system 	<p>Pupils will learn:</p> <p>Light</p> <ul style="list-style-type: none"> • Recognise the need for light to see and that dark is the absence of light • Light comes from different sources • Light is reflected from surfaces • Light from the sun can be dangerous and know how to protect our eyes. • Shadows are formed when light is blocked from the source by a solid object (<i>set up experiment</i>) using transparent, translucent and opaque materials • Find patterns in the way shadows change throughout the day
<p>Key Vocab: Flowering, function, transportation, life cycle, pollination, seeds, dispersal, fertilisation, pollen, stamen, carpel, sepal, germination, pollinator</p> <p>Sound, vibrate, volume, pitch, strength, pattern, increase, decrease</p>	<p>Key Vocab: Sedimentary, metamorphic and igneous, rock, soil, Sandstone, Granite, Marble, limestone, Pumice, Soil profile, clay, Sandy, Loam, Peat,</p> <p>Animal, mammal, nutrition, skeleton, muscle, support, protection, movement, function, digestive, intestine, organ, incisors, canines, molars</p>	<p>Key Vocab: Light, dark, shadow, reflect, source, absence, refract, transparent, translucent and opaque</p>
<p>Curriculum enhancement:</p>	<p>Curriculum enhancement: Wormery in class</p>	<p>Curriculum enhancement: Shadow puppet homework</p>
<p>Essential Knowledge: PLANTS</p> <ul style="list-style-type: none"> • Name and label the parts of a flowering plant • The Life Cycle of a Flowering Plant • How a plant uses water • Life on Earth would not be able to exist without plants. They can make oxygen which is essential for humans and other animals to be able to breathe and stay alive. They also provide us with materials for building, clothing, fuel, medicine and more. 	<p>Essential Knowledge: ROCKS and SOILS</p> <ul style="list-style-type: none"> • Fossils are the preserved evidence of plants and animals that once lived on Earth. • There are two types of fossils, body fossils and trace fossils • Rocks are made up of minerals. A mineral is a naturally occurring solid substance • Rocks are classified as Igneous, Sedimentary, Metamorphic. 	<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • Light sources give out light. The Sun is our most important source of light. • Other natural light sources include fire, lightning, stars and bioluminescence (from animals that emit light, such as fireflies). We also get light from man-made sources. These include electric lights, candles, torches and computer screens. • The sun produces an extremely powerful light so it is important to protect your eyes. • Shadows are formed when light hits an opaque object.

<p>SOUND</p> <ul style="list-style-type: none"> • Sound is created when something vibrates and sends waves of energy (vibration) into our ears. • The vibrations travel through the air or another medium (solid, liquid or gas) to the ear. • The stronger the vibrations, the louder the sound. Sounds are fainter the further you get from the sound source. • Sound changes depending on how fast or slow an object vibrates to make sound waves. • Pitch is the quality of a sound (high or low) and depends on the speed of the vibrations. • Different materials produce different pitches; if an object vibrates quickly we hear a high-pitched sound, and if an object vibrates slowly we hear a low-pitched sound. • Sounds are usually a mixture of lots of different kinds of sound waves 	<ul style="list-style-type: none"> • Igneous rock is formed as a result of volcanic activity • Sedimentary rock builds up in layers, also known as strata, over millions of years. • Metamorphic rock is formed when heat or pressure changes the structure of a rock. • Soil is the thin layer of material found on the Earth's surface. It is formed by the weathering of rocks • Soil is composed of different layers. • <p>ANIMALS inc HUMANS</p> <ul style="list-style-type: none"> • The skeleton protects the organs and allows the body to move. • Without muscles, your body could not move. There are three different types of muscle in the human body: skeletal muscle (attached to your skeleton), smooth muscle (found inside hollow organs), cardiac muscle (found in the heart). • The digestive system involves a number of different organs and chemicals and takes place in a number of stages – children can explain the process • Teeth help us to cut, tear and crush our food before we swallow it. Humans have three types of teeth 	<ul style="list-style-type: none"> • Light travels in straight lines
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Year 4 Science Curriculum

NC objectives:

During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

Term 1 - Who let the Gods out?	Term 2 – Raiders and Invaders	Term 3- Coasts
<p>Pupils will learn:</p> <p>Living things and their habitat</p> <ul style="list-style-type: none"> • Living things can be grouped in different ways. • Explore and use classification keys to group and name a variety of living things in the local and wider environment. • Recognize that environments can change and that this can pose a danger to living things <p>Electricity</p> <ul style="list-style-type: none"> • Identify common appliances that run on electricity • Construct a simple circuit and name the basic parts (<i>experiment</i>) 	<p>Pupils will learn:</p> <p>Forces and Magnets</p> <ul style="list-style-type: none"> • Compare how things move on different surfaces - (<i>experiment with friction</i>) • Understand forces and know whether they are a push or a pull force • Notice that some forces need contact between 2 objects, but magnetic force can act at a distance • Magnets attract and repel each other and attract some materials • Group materials based on whether they are magnetic • Describe magnets as having 2 poles • Predict whether 2 magnets will attract or repel 	<p>Pupils will learn:</p> <p>States of Matter:</p> <ul style="list-style-type: none"> • Compare and group solids, liquids and gases • Understand the properties of solids, liquids and gases. • Know that materials can change state when heated or cooled, measure temperatures when this happens (<i>experiment</i>) <p>States of Matter</p> <ul style="list-style-type: none"> • Understand the water cycle • Evaporation and condensation in water cycles • associate water evaporation with the temperature
<p>Key Vocab: fish, amphibians, reptiles, mammals and bird, habitat, survive, classification, environment, Electricity, circuit, bulb, cell, wire, conductor, insulator</p>	<p>Key Vocab: Upthrust Air Resistance Water Resistance Compression Squash Drag Friction Gravity Stretch Turn Twist Magnetism</p>	<p>Key Vocab: solids, liquids and gases, cooling, melting, freezing, change state, evaporation, condensation, temperature,</p>
<p>Curriculum enhancement:</p>	<p>Curriculum enhancement: Magnet toys to experiment with</p>	<p>Curriculum enhancement: Now press play – water cycle</p>
<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • All plants and animals live in a habitat. Their habitat is the environment around them, including the other plants and animals that live there. The habitat provides everything the plant or animal needs to survive. • Group animals according to what they eat, where they live and what type of animal they are (fish, amphibians, reptiles, mammals and bird) • Use a classification key and create one. • Animal adaptations are the ways in which an animal has developed characteristics to help them survive in their environment. Over a long period of time, features develop that are suited to the animal's habitat • Understand how an animal can become extinct through climate change and changes in their environments • Children can define what an electrical appliance is and identify those that are mains- or battery powered. 	<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • A force is a push or a pull upon an object • Forces are measured in newtons. • Friction is a force that is felt when two surfaces rub against each other • Gravity is the force that attracts objects to the Earth • Air resistance is a kind of friction which happens when an object is moving through air Water resistance is the force that occurs when an object moves through water. • Magnetism can be a pushing or a pulling force. They attract or repel each other 	<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • Matter exists in three main states; solids, liquids and gases. • Materials can be changed from one state to another by heating or cooling. • Matter is made from tiny particles which are too small to see. • These particles are arranged differently in different states of matter • Matter can change from one state to another by heating or cooling. When matter changes states, the particles do not change, but the way that they are arranged and move around does. • Different materials change states at different temperatures. • Water is essential to life on Earth. All of our water has been here for hundreds of millions of years. Water never leaves our planet and no new water is ever made. • Water changes state, depending on the temperature. • When water is heated and turns into water vapour, the process is called evaporation.

<ul style="list-style-type: none">• Children can identify different circuit components and explain what they do.• Children can build series circuits, identifying and explaining whether they are complete or incomplete.• Children can explain what electrical conductors and insulators are and give several examples of these.• Children can identify several different switches and explain how switches work in a circuit.• Children can apply their knowledge of electricity to different situations.		<ul style="list-style-type: none">• When water vapour is cooled, it turns back into water, this process is called condensation.• These processes are very important in the water cycle, as they make it possible for water to move around in the atmosphere
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Year 5 Science Curriculum

NC objectives:

During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision
- recording data and results of increasing complexity
- using scientific diagrams and labels, classification keys, tables, and bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations
- identifying scientific evidence that has been used to support or refute ideas or arguments.

Term 1 - WW2	Term 2 – Incredible Earth	Term 3- Being Human
<p>Pupils will learn:</p> <p>Materials:</p> <ul style="list-style-type: none"> • To compare and group together everyday materials on the basis of their properties, <ul style="list-style-type: none"> ➢ Hardness ➢ solubility, ➢ Transparency ➢ conductivity (electrical and thermal) ➢ response to magnets • Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood, fabric, glass and plastic. • Understand that some materials can change and that they can change over time. • Look at how different materials can be disposed of and whether or not they can be recycled. 	<p>Pupils will learn:</p> <p>Earth and Space</p> <ul style="list-style-type: none"> • Describe the movement of Earth, & other planets, relative to the Sun in the solar system • Describe the movement of the Moon relative to the Earth • Describe the Sun, Earth and Moon as approximately spherical bodies • Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky 	<p>Pupils will learn:</p> <p>Animals including humans</p> <ul style="list-style-type: none"> • Recognise the impact of diet, exercise, drugs and lifestyle on the way bodies function • Identify and name parts of the circulatory system. Describe functions of blood vessels, heart and blood. • Understand how nutrients and water are transported in the body. <p>Evolution and inheritance</p> <ul style="list-style-type: none"> • recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago • recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents • identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
<p>Key Vocab: Light, Heavy, Shiny, Dull, Malleable, Brittle, Strong, Weak, Transparent, Opaque, Hard, Soft, Rough, Smooth, Soluble, Insoluble, Magnetic, Conductor, Insulator</p>	<p>Key Vocab: Crater, asteroid, crust, atmosphere, cluster, constellation, core, axis, planet, comets, planets, solar system,</p>	<p>Key Vocab: Diet, exercise, lifestyles, function, inhabit, circulatory, nutrient, transport, evolution, inheritance, offspring, adaptation, environment</p>
<p>Curriculum enhancement:</p>	<p>Curriculum enhancement: Now Press Play – Mission to Mars</p>	<p>Curriculum enhancement: Now Press Play – evolution</p>
<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • The properties of a material are the characteristics that make it suitable for a particular purpose. • Materials can be grouped together and described according to their properties. • New materials are being developed all the time by scientists and inventors for different purposes. Often this involves improving an existing material. 	<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • The Solar System is the name given to all of the planets, moons, comets, asteroids, minor planets, dust and gases that orbit our Sun. It can be found inside a galaxy called The Milky Way • There are eight planets in the Solar System - key facts about each one. • Moon travels completely around the Earth every 27.32 days and this forms the basis of the months in our calendar. The Moon is the brightest object in the night sky but it has no light of its own. • Some understanding of moon phases • The Sun is a star. It gives out heat and light and makes life possible on Earth. • The heat and light from the Sun is felt and seen on Earth. • Stars are orbited by planets. • The Sun is roughly spherical in shape and is much, much bigger than the Earth. 1,300,000 times bigger! 	<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • Blood is pumped around your circulatory system many times each day. • The heart propels the blood through the network of blood vessels (veins, arteries and capillaries), so that it can carry nutrients and oxygen around the body and back again. • The heart is an extremely strong muscle that is constantly contracting. • It has four different chambers. • Blood delivers oxygen and food around your body. • Blood removes waste products, It keeps your body warm and It fights off diseases. • Your heart rates changes, depending on how active your body is. If you are exercising, your heart beats faster because your muscles need more oxygen and food to keep going • Being healthy is important because your body needs a balanced diet of certain nutrients, vitamins and minerals. • To stay healthy you need to eat healthy foods and drink plenty of water. You also need to do lots of exercise and get enough

		<p>sleep. You need to keep yourself clean, not smoke or do drugs.</p> <ul style="list-style-type: none">• Evolution explains how the living things on our planet today have slowly developed from simpler life forms that lived millions of years ago.• Evolution means animals/plants have adapted or adjusted their characteristics to increase their chance of survival in the environment they were in• When living things reproduce they pass on characteristics to their offspring. This is known as inheritance.
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Year 6 Science Curriculum

NC objectives:

During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision
- recording data and results of increasing complexity
- using scientific diagrams and labels, classification keys, tables, and bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations
- identifying scientific evidence that has been used to support or refute ideas or arguments.

Term 1 - Magic and Mayhem	Term 3- Romans	Term 2 – China
<p>Pupils will learn:</p> <p>Changes to materials</p> <ul style="list-style-type: none"> • know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution • use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating • demonstrate that dissolving, mixing and changes of state are reversible changes • Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. <p>Forces</p> <ul style="list-style-type: none"> • Identify the effects of air resistance, water resistance and friction, that act between moving surfaces • Recognize that some mechanisms allow a smaller force to have a greater effect (levers, pulleys and gears) 	<p>Pupils will learn:</p> <p>Electricity</p> <ul style="list-style-type: none"> • Understand that electricity is a form of energy and powers different objects • Understand materials that conduct or insulate electricity • Associate the brightness of a lamp/volume of a buzzer with the number and voltage of cells in a circuit. • Compare and give reasons for variations in how components function – brightness of bulbs, loudness of buzzers, switches etc • Use symbols when representing circuits in a diagram • 	<p>Pupils will learn:</p> <p>Living things and their habitat</p> <ul style="list-style-type: none"> • Describe differences in <u>life cycles</u> of a mammal, amphibian, insect and bird • Describe the life process of reproduction in some plants and animals • Describe how living things are classified into broad groups according to common observable characteristics (microorganisms, plants, animals) • Give reasons for classifying plants and animals on specific characteristics
<p>Key Vocab: Dissolve, solution, insoluble, solid, liquid, gas, mixture, separate, filter, sieve, evaporate, reversible, irreversible, change of state</p>	<p>Key Vocab: Brightness, buzzer, voltage, circuit, component, function, symbol, , friction, force, lever, pulley, gear, conductor, Upthrus,t Air Resistance Water Resistance Compression Squash Drag Friction Gravity Stretch Turn Twist</p>	<p>Key Vocab: Mammal, amphibian, insect, life process, reproduction, classification, observable, characteristics, microorganism,</p>
<p>Curriculum enhancement:</p>	<p>Curriculum enhancement: Now press Play - electricity</p>	<p>Curriculum enhancement: Now Press Play - Plants</p>
<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • Materials can be changed by being heated, cooled or mixed with another material. • Some changes to materials are irreversible • If a material dissolves in water (forms a solution) we say that it is soluble. • If materials with particles of different sizes become mixed together, they can be separated by sieving • When an insoluble material is mixed with water, it is possible to separate the material from the water again using a filter 	<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • Electricity is a form of energy • Electricity is amazingly useful, but can be dangerous, • A conductor is a material that allows electricity to flow through it easily • An insulator is a material that does not allow electricity to flow through it easily. • A circuit allows the electrical current to flow from the negative terminal of the cell (battery) to the positive. The circuit must be complete or the electricity cannot flow and the item will not work. 	<p>Essential Knowledge:</p> <ul style="list-style-type: none"> • All animals and plants have a life cycle • All animals and plants reproduce during their life cycle • Flowering plants reproduce through pollination. This means that the pollen inside one flower is transferred to another plant, causing seeds to form (fertilisation). • Life cycles of different types of animals can look very different. While some animals begin life looking like small versions of the adult, other go through distinct stages which are so different it can be difficult to believe that they are the same animal.

<ul style="list-style-type: none">• If the material, for example sand, does not form a solution in water, it is insoluble• Air resistance is a kind of friction which happens when an object is moving through air• Water resistance is the force that occurs when an object moves through water.• When there are two forces acting on an object in opposite directions, with an equal amount of force, the forces are described as balanced• When there are two forces acting on an object in opposite directions, with an unequal amount of force, the forces are described as unbalanced. When forces are unbalanced, the motion of an object will change.• A lever is a simple machine which allows you to lift a heavier weight with a smaller force.• A pulley is another simple machine which can make lifting easier. It has a rope which is threaded around a wheel. This changes the direction of the force (you pull the rope to lift the weight, rather than pick it up directly). Often there are two wheels in a pulley system, making lifting even easier.• Gears are wheels that have teeth cut out. The teeth lock together so that turning one gear will move all of the gears connected to it. A large gear (or cog) will turn more slowly but with more force than a smaller one.	<ul style="list-style-type: none">• If you add more cells to a circuit, this increases the voltage.• When you are drawing a circuit, you should use the following symbols so that others can understand your diagram•	<p>Compare different classes of animal (ladybird, frog, chicken, dog)</p>
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