

Year B SCIENCE

EYFS

Y1/2

Y3/4

Y5/6

Procedural knowledge (from NC)

AREA OF DEVELOPMENT
Understanding the World

STRAND
The Natural World
* Explore the natural world around them, making observations and drawing pictures of animals and plants
* Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class
* Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter

To work scientifically

- Ask simple questions.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use observations and ideas to suggest answers to questions.
- Gather and record data to help in answering questions.

Biology
To understand plants

- Identify and name a variety of common plants, including garden plants, wild plants and trees and those classified as deciduous and evergreen.
- Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.
- 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.

Biology
To understand animals and humans

- Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates.
- 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 (birds, fish, amphibians, reptiles, mammals and invertebrates, 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.

- Notice that animals, including humans, have offspring which grow into adults.
- Investigate 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

Biology
To investigate living things

- Explore and compare the differences between things that are living, that are dead and 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.

To work scientifically

- Ask relevant questions.
- Set up simple practical enquiries and comparative and fair tests.
- Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers.
- Gather, record, classify and present data in a variety of ways to help in answering questions.
- Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
- Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests.
- Identify differences, similarities or changes related to simple, scientific ideas and processes.
- Use straightforward, scientific evidence to answer questions or to support their findings.

Biology
To understand plants

- Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.

- Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.
- Investigate the way in which water is transported within plants.
- Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Biology
To understand animals and humans

- Identify that animals, including humans, need the right types and amounts of nutrition that they cannot make their own food and they get nutrition from what they eat.
- Describe the ways in which nutrients and water are transported within animals, including humans.
- Identify that humans and some animals have skeletons and muscles for support, protection and movement.

- Describe the simple functions of the basic parts of the digestive system in humans.
- Identify the different types of teeth in humans and their simple functions.

Biology
To investigate living things

- Identify and name a variety of living things (plants and animals) in the local and wider environment, using classification keys to assign them to groups.
- Give reasons for classifying plants and animals based on specific characteristics.

To work scientifically

- Plan enquiries, including recognising and controlling variables where necessary.
- Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work.
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision.
- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models.
- Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions.
- Present findings in written form, displays and other presentations.
- Use test results to make predictions to set up further comparative and fair tests.
- Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.

Biology
To understand plants

- Relate knowledge of plants to studies of evolution and inheritance.
- Relate knowledge of plants to studies of all living things.

Biology
To understand animals and humans

- Identify and name the main parts of the human circulatory system, and explain the functions of the heart, blood vessels and blood (including the pulse and clotting).

Biology
To investigate living things

- Describe the life cycles common to a variety of animals, including humans (birth, growth, development, reproduction, death), and to a variety of plants (growth, reproduction and death).

- Explain the classification of living things into broad groups according to common, observable characteristics and based on similarities and differences, including plants, animals and micro-organisms.
- Describe the life process of reproduction in some plants and animals.
- Describe the changes as humans develop from birth to old age.
- Recognise the impact of diet, exercise, drugs and lifestyle on the way human bodies function.

Biology
To understand evolution and inheritance

- Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.

- Describe how adaptation leads to evolution.
- Recognise how and why the human skeleton has changed over time, since we separated from other primates.

Biology
To understand evolution and inheritance

- Identify how humans resemble their parents in many features.

Chemistry
To investigate materials

- 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.
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
- Identify and compare the uses of a variety of everyday materials, including wood, metal, plastic, glass, brick/rock, and paper/cardboard.

Physics
To understand movement, forces and magnets

- Notice and describe how things move, using simple comparisons such as faster and slower.
- Compare how different things move.
- Observe the apparent movement of the Sun during the day.
- Observe changes across the four seasons.
- Observe and describe weather associated with the seasons and how day length varies.

Physics
To understand light and seeing

- Observe and name a variety of sources of light, including electric lights, flames and the Sun, explaining that we see things because light travels from them to our eyes.

Physics
To investigate sound and hearing

- Observe and name a variety of sources of sound, noticing that we hear with our ears.

Physics
To understand electrical circuits

- Identify common appliances that run on electricity.
- Construct a simple series electrical circuit.

Physics
To understand the Earth's movement in space

- Observe the apparent movement of the Sun during the day.
- Observe changes across the four seasons.
- Observe and describe weather associated with the seasons and how day length varies.

- Recognise that environments are constantly changing and that this can sometimes pose dangers to specific habitats.

Biology
To understand evolution and inheritance

- Identify how plants and animals, including humans, resemble their parents in many features.
- Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.
- Identify how animals and plants are suited to and adapt to their environment in different ways.

Chemistry
To investigate materials

- Compare and group together different kinds of rocks on the basis of their simple, physical properties.
- Relate the simple physical properties of some rocks to their formation (igneous or sedimentary).
- Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock.
- Compare and group materials together, according to whether they are solids, liquids or gases.
- Observe that some materials change state when they are heated or cooled, and measure the temperature at which this happens in degrees Celsius (°C), building on their teaching in mathematics.
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Physics
To understand movement, forces and magnets

- Notice that some forces need contact between two objects and some forces act at a distance.
- Observe how magnets attract or repel each other and attract some materials and not others.
- Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet and identify some magnetic materials.

Physics
To understand light and seeing

- Notice that light is reflected from surfaces.
- Associate shadows with a light source being blocked by something; find patterns that determine the size of shadows.

Physics
To investigate sound and hearing

- Identify how sounds are made, associating some of them with something vibrating.
- Recognise that sounds get fainter as the distance from the sound's source increases.

Chemistry
To investigate materials

- Compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, conductivity (electrical and thermal), and response to magnets.
- Understand how 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.
- Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.
- 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, oxidation and the action of acid on bicarbonate of soda.

Physics
To understand movement, forces and magnets

- Describe magnets as having two poles.
- Predict whether two magnets will attract or repel each other, depending on which poles are facing.
- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
- Identify the effect of drag forces, such as air resistance, water resistance and friction that act between moving surfaces.
- Describe, in terms of drag forces, why moving objects that are not driven tend to slow down.
- Understand that force and motion can be transferred through mechanical devices such as gears, pulleys, levers and springs.

Physics
To understand light and seeing

- Understand that light appears to travel in straight lines.
- Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eyes.
- Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them, and to predict the size of shadows when the position of the light source changes.

Physics
To investigate sound and hearing

- Find patterns between the pitch of a sound and features of the object that produced it.
- Find patterns between the volume of a sound and the strength of the vibrations that produced it.

Physics
To understand electrical circuits

- Identify and name the basic parts of a simple electrical circuit, including cells, wires, bulbs, switches and buzzers.
- Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.
- Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.

		<p>Physics To understand electrical circuits</p> <ul style="list-style-type: none"> Identify whether or not a lamp will light in a simple series circuit based on whether or not the lamp is part of a complete loop with a battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators and associate metals with being good conductors. <p>Physics To understand the Earth's movement in space</p> <ul style="list-style-type: none"> Describe the movement of the Earth relative to the Sun in the solar system. Describe the movement of the Moon relative to the Earth. 	<p>Physics To understand the Earth's movement in space</p> <ul style="list-style-type: none"> Describe the Sun, Earth and Moon as approximately spherical bodies. Use the idea of the Earth's rotation to explain day and night.
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Units and declarative knowledge (specific information we want children to know and remember)

<p>AUTUMN 1 ALL ABOUT ME * Describe what they see, hear and feel whilst outside * Explore the natural world</p> <p>SEASONS & WEATHER – ALL ABOUT AUTUMN * Understand the effect of changing seasons on the natural world around them * Use all their senses in hands on exploration of natural materials</p> <p>AUTUMN 2 NIGHT & DAY * Talk about the differences between materials and changes they notice</p> <p>CHRISTMAS IS COMING * Understand the key features of the life cycles of a plant and an animal *Protected Characteristics links to Age (see Embedding Protected Characteristics Document)</p> <p>SPRING 1 SEASONS & WEATHER – WINTER WONDERLAND * Explore collections of materials with similar and/or different properties</p> <p>ANIMALS AROUND THE WORLD * Begin to understand the need to respect and care for the natural environment and all living things</p> <p>SPRING 2 LIFE ON THE FARM * Plant seeds and care for growing plants</p> <p>TRANSPORT * Explore and talk about different forces they can feel</p> <p>SUMMER 1 THE BIG WIDE WORLD/BUILD IT UP * Recognise some environments that are different to the one in which they live</p> <p>SUMMER 2</p>	<p>Yr1 Enchanted Woodland</p> <ul style="list-style-type: none"> The local environment is a habitat for living things and can change during the seasons. Plants are living things. Common plants include the daisy, daffodil and grass. Trees are large, woody plants and are either evergreen or deciduous. Trees that lose their leaves in the autumn are called deciduous trees. Examples include oak, beech and rowan. Trees that keep their leaves all year round are called evergreen trees. Examples include holly and pine. Objects, materials and living things can be looked at and compared Simple equipment is used to take measurements and observations. Examples include metre sticks, measuring tapes, egg timers and hand lenses. Question words include what, why, how, when, who and which. The basic plant parts include root, stem, leaf, flower, petal, fruit, seed and bulb. Trees have a woody stem called a trunk. Simple tests can be carried out by following a set of instructions. The results are information that has been found out from an investigation. Living things need to be cared for in order for them to survive. They need water, food, warmth and shelter. 	<p>Yr3/4 Mighty Metals</p> <ul style="list-style-type: none"> An object will not move unless a pushing or pulling force is applied. Some forces require direct contact, whereas other forces can act at a distance, such as magnetic force. Friction is a force between two surfaces as they move over each other. Friction slows down a moving object. Smooth surfaces usually generate less friction than rough surfaces. Some materials have magnetic properties. Magnetic materials are attracted to magnets. All magnetic materials are metals but not all metals are magnetic. Iron is a magnetic metal. Equipment is used to take measurements in standard units. Examples include data loggers plus sensors, timers (seconds, minutes and hours), thermometers (°C) and metre sticks (millimetres, centimetres and metres). Taking repeat readings can increase the accuracy of the measurement. Magnets have two poles (north and south). Opposite poles (north and south) attract each other, while like poles (north and north, or south and south) repel each other. Tests can be set up and carried out by following or planning a set of instructions. A prediction is a best guess for what might happen in an investigation based on some prior knowledge. Data can be recorded and displayed in different ways, including tables, charts, graphs and labelled diagrams. Data can be used to provide evidence to answer questions. Results are information that has been discovered as part of an investigation. A conclusion is the answer to a question that uses the evidence collected. 	<p>Yr4/5 Darwin's Delights</p> <ul style="list-style-type: none"> Data can be recorded and displayed in different ways, including tables, bar and line charts, scatter graphs, classification keys and labelled diagrams. Scientists classify living organisms into broad groups according to their characteristics. Vertebrates are an example of a classification group. There are a number of ranks, or levels, within the biological classification system. The first rank is called a kingdom, the second a phylum, then class, order, family, genus and species. A method is a set of clear instructions for how to carry out a scientific investigation, including what equipment to use and observations to make. A variable is something that can be changed during a fair test. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding. Animals that sexually reproduce generate new offspring of the same kind by combining the genetic material of two individuals. Each offspring inherits two of every gene, one from the female parent and one from the male parent. Animals and plants can be bred to produce offspring with specific and desired characteristics. This is called selective breeding. Examples include cows that produce large quantities of milk or crops that are disease-resistant. An adaptation is a physical or behavioural trait that allows a living thing to survive and fill an ecological 	<p>Yr5/6 Blood Heart</p> <ul style="list-style-type: none"> The circulatory system includes the heart, blood vessels and blood. The heart pumps blood through the blood vessels and around the body. There are three types of blood vessel: arteries, veins and capillaries. They each have a different-sized hole (lumen) and walls. The blood carries gases (oxygen and carbon dioxide), water and nutrients to where they are needed. The red blood cells carry oxygen and carbon dioxide around the body. The blood also contains white blood cells, which protect the body from infection. Specialised equipment is used to take accurate measurements in standard units. Examples include data loggers plus sensors, such as light (lux), sound (dB) and temperature (°C); timers (seconds, minutes and hours); thermometers (°C) and measuring tapes (millimetres, centimetres, metres). The role of the circulatory system is to transport oxygen, water and nutrients around the body. They are transported in blood and delivered to where they are needed. Questions can help us find out about the world and can be answered using a range of scientific enquiries, including fair tests, research and observation. A method is a set of clear instructions for how to carry out a scientific investigation, including what equipment to use and observations to make. A variable is something that can be changed during a fair test. A prediction is a statement about what might happen
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<p>SEASONS & WEATHER – SUMMERTIME * Understand the effect of changing seasons on the natural world around them</p> <p>MACHINES & TECHNOLOGY/MOVING ON * Explore how things work</p>	<p>Yr2 Wiggle and Crawl</p> <ul style="list-style-type: none"> • Simple equipment is used to take measurements and observations. Examples include timers, hand lenses, metre sticks and trundle wheels. • A habitat is a place where a living thing lives. A microhabitat is a very small habitat. • Animals need water, food, air and shelter to survive. Their habitat must provide all these things. • Questions can help us find out about the world. • Tests can be carried out by following a set of instructions. A prediction is a guess at what might happen in an investigation. • Food chains show how living things depend on one another for food. All food chains start with a plant, followed by animals that either eat the plant or other animals. • Animals have offspring that grow into adults. Different animals have different stages of growth or life cycles. • The results are information that has been found out from an investigation and can be used to answer a question. • Protected Characteristics links to Age (see Embedding Protected Characteristics Document) <p>Yr2 Scented Garden</p> <ul style="list-style-type: none"> • Questions can help us find out about the world. • Plants grow from seeds and bulbs. Seeds and bulbs need nutrients from soil, water and warmth to start growing (germinate). As the plant grows bigger, it develops leaves and flowers. • Objects, materials and living things can be looked at, compared and grouped according to their features. • The results are information that has been found out from an investigation and can be used to answer a question. • Plants need water, light and a suitable temperature to grow and stay healthy. Without any one of these things, they will die. 		<p>niche. Adaptations evolve by natural selection. Favourable traits help an organism survive and pass on their genes to subsequent generations.</p> <ul style="list-style-type: none"> • Questions can help us find out about the world and can be answered using a range of scientific enquiries, including fair tests, research and observation. • Protected Characteristics links to Disability (see Embedding Protected Characteristics Document) • Protected Characteristics links to Gender Reassignment (see Embedding Protected Characteristics Document) 	<p>in an investigation based on some prior knowledge or understanding.</p> <ul style="list-style-type: none"> • Lifestyle choices can have a positive (exercise and eating healthily) or negative (drugs, smoking and alcohol) impact on the body. <p>Yr5/6 Star Gazers</p> <ul style="list-style-type: none"> • The results are information, such as measurements or observations, which have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected. • The Sun, Earth, Moon and the planets in our solar system are roughly spherical. All planets are spherical because their mass is so large that they have their own force of gravity. This force of gravity pulls all of a planet’s material towards its centre, which compresses it into the most compact shape – a sphere. • As Earth orbits the Sun, it also spins on its axis. It takes Earth a day (24 hours) to complete a full spin. During the day, the Sun appears to move through the sky. However, this is due to the Earth rotating and not the Sun moving. Earth rotates to the east or, if viewed from above the North Pole, it rotates anti-clockwise, which means the Sun rises in the east and sets in the west. As Earth rotates, different parts of it face the Sun, which brings what we call daytime. The part facing away is in shadow, which is night time. • The Moon orbits Earth, completing a full orbit every month (28 days). • Specialised equipment is used to take measurements in standard units. Examples include data loggers plus sensors, such as light (lux), sound (dB) and temperature (°C); timers (seconds, minutes and hours); thermometers (°C), and measuring tapes (millimetres, centimetres, metres). • Gravity is a force of attraction. Anything with a mass can exert a gravitational pull on another object. The Earth's large mass exerts a gravitational pull on all objects on Earth, making dropped objects fall to the ground. • A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on
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Non-subject specific units

<p>Due to the nature of EYFS additional statements from the Development Matters curriculum are taught within topics and themes that are developed from the children's interests as and when they arise.</p>	<p>Yr1 Moon Zoom!</p> <ul style="list-style-type: none"> Materials have different properties, such as hard or soft; stretchy or stiff; rough or smooth; opaque or transparent; bendy or rigid; waterproof or not waterproof; magnetic or non-magnetic. Materials can be grouped according to their properties. Data can be recorded and displayed in different ways, including tables, pictograms and drawings. Question words include what, why, how, when, who and which. Simple tests can be carried out by following a set of instructions. A material is what an object is made from. Everyday materials include wood, plastic, glass, metal, water, rock, brick, paper and fabric. Electrical circuits can light lamps or sound a buzzer. A switch turns an electrical circuit off and on. 	<p>Yr3 Tremors</p> <ul style="list-style-type: none"> An observation involves looking closely at objects, materials and living things, which can be compared and grouped according to their features. There are three different rock types: sedimentary, igneous and metamorphic. Sedimentary rocks form from mud, sand and particles that have been squashed together over a long time to form rock. Examples include sandstone and limestone. Igneous rocks are made from cooled magma or lava. They usually contain visible crystals. Examples include pumice and granite. Metamorphic rocks are formed when existing rocks are heated by the magma under the Earth's crust or squashed by the movement of the Earth's tectonic plates. They are usually very hard. Examples include slate and marble. Tests can be set up and carried out by following or planning a set of instructions. A prediction is a best guess for what might happen in an investigation based on some prior knowledge. Data can be recorded and displayed in different ways, including tables, charts, graphs and labelled diagrams. Data can be used to provide evidence to answer questions. 	<p>Yr4/5 Peasants, Princes and Pestilence</p> <ul style="list-style-type: none"> A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding. Data can be recorded and displayed in different ways, including tables, bar and line charts, classification keys and labelled diagrams. A life cycle is the series of changes in the life of a living thing and includes these basic stages: birth, growth, reproduction and death. Mammals' life cycles include the stages: embryo, baby, adolescent and adult. Amphibians' life cycles include the stages: egg, larva (tadpole), adolescent and adult. Some insects' (butterflies, beetles and bees) life cycles include the stages: egg, larva, pupa and adult. Birds' life cycles include the stages: egg, baby, adolescent and adult. Questions can help us find out about the world and can be answered using a range of scientific enquiries. Protected Characteristics links to Age (see Embedding Protected Characteristics Document) 	<p>Yr5/6 Hola Mexico!</p> <ul style="list-style-type: none"> A shadow appears when an object blocks the passage of light. Apart from some distortion or fuzziness at the edges, shadows are the same shape as the object. The distortion or fuzziness depends on the position or type of light source.
	<p>Yr1 Superheroes</p> <ul style="list-style-type: none"> Objects, materials and living things can be looked at and compared. The results are information that has been found out from an investigation. The basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet. The five senses are hearing, sight, smell, taste and touch. Ears are used for hearing, eyes are used to see, the nose is used to smell, the tongue is used to taste and skin gives the sense of touch. Simple tests can be carried out by following a set of instructions. Relationships and Sex Ed. Link: the need of babies and young people Relationships and Sex Ed. Link: the names of main external parts of the body including agreed names for sexual parts Protected Characteristics links to Disability (see Embedding Protected Characteristics Document) 	<p>Yr3/4 Blue Abyss</p> <ul style="list-style-type: none"> Data can be recorded and displayed in different ways, including tables, charts, graphs, keys and labelled diagrams. Scientists classify living things according to shared characteristics. Animals can be divided into six main groups: mammals, reptiles, amphibians, birds, fish and invertebrates. These groups can be further subdivided. Classification keys are scientific tools that aid the identification of living things. Questions can help us find out about the world and can be answered using scientific enquiry. Food chains show what animals eat within a habitat and how energy is passed on over time. All food chains start with a producer, which is typically a green plant. The producer is eaten by a primary consumer (prey), which is eaten by a secondary consumer (prey), which is eaten by a tertiary consumer. All food chains end with a top or 	<p>Yr4/5 Gallery Rebels</p> <ul style="list-style-type: none"> A method is a set of clear instructions for how to carry out a scientific investigation, including what equipment to use and observations to make. A variable is something that can be changed during a fair test. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding. A shadow appears when an object blocks the passage of light. Apart from some distortion or fuzziness at the edges, shadows are the same shape as the object. The distortion or fuzziness depends on the position or type of light source. 	<p>Yr5/6 Allotment</p> <ul style="list-style-type: none"> A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding. Data can be recorded and displayed in different ways, including tables, bar and line charts, classification keys and labelled diagrams. An observation involves looking closely at objects, materials and living things. Accurate observations can be made repeatedly or at regular intervals to identify changes over time. Parts of a flower include the stamen, filament, anther, pollen, carpel, stigma, style, ovary, ovule and sepal. Pollination is when the male part of a plant (pollen) is carried, by wind, insects or other animals, to the female part of the plant (carpel). The pollen travels to the ovary, where it fertilises the ovules (eggs). Seeds are then produced, which disperse far away from the parent plant and grow new plants. Reproduction is the process of producing offspring and is essential for the continued survival of a species. There are two types of reproduction: sexual and asexual. Sexual reproduction involves two parents (one female and one male) and produces offspring that are different from the parents. Asexual reproduction involves one parent and produces offspring that is identical to the parent. Data can be recorded and displayed in different ways, including tables,
	<p>Yr1 Paws, Claws and Whisker</p> <ul style="list-style-type: none"> Carnivores eat other animals (meat), herbivores eat plants and omnivores eat other animals and plants. Objects, materials and living things can be looked at and compared. Data can be recorded and displayed in different ways, including tables, pictograms and drawings. Simple tests can be carried out by following a set of instructions. Different animal groups have some common body parts, such as eyes and a mouth, and some different body parts, such as fins or wings. 			

	<ul style="list-style-type: none"> Animals are living things. Animals can be sorted and grouped into six main groups: fish, amphibians, reptiles, birds, invertebrates and mammals. <p>Yr1 Big Lights, Big City</p> <p>NB The curriculum map suggests that this topic covers <i>everyday materials</i>, and <i>working scientifically</i>. However, on the Cornerstones site, there are no Science objectives for this topic.</p> <p>Yr2 Bounce</p> <ul style="list-style-type: none"> Objects, materials and living things can be looked at, compared and grouped according to their features. The results are information that has been found out from an investigation and can be used to answer a question. Tests can be carried out by following a set of instructions. A prediction is a guess at what might happen in an investigation. Simple equipment is used to take measurements and observations. Examples include timers, hand lenses, metre sticks and trundle wheels. A healthy lifestyle includes exercise, good hygiene and a balanced diet. Some objects and materials can be changed by squashing, bending, twisting, stretching, heating, cooling, mixing and being left to decay. <p>Yr2 Street Detectives</p> <ul style="list-style-type: none"> A habitat is a place where a living thing lives. A microhabitat is a very small habitat. A material's physical properties make it suitable for particular purposes, such as glass for windows and brick for building walls. Many materials are used for more than one purpose, such as metal for cutlery and cars. Simple equipment is used to take measurements and observations. Examples include timers, hand lenses, metre sticks and trundle wheels. <p>Yr2 Land Ahoy</p> <ul style="list-style-type: none"> A material's physical properties make it suitable for particular purposes, such as glass for windows and brick for building walls. Many materials are used for more than one purpose, such as metal for cutlery and cars. Some objects float and others sink. Objects that float are typically light or hollow. Objects that sink are typically heavy or dense. Tests can be carried out by following a set of instructions. A prediction is a guess at what might happen in an investigation. <p>Yr2 Towers, Tunnels and Turrets</p> <ul style="list-style-type: none"> Data can be recorded and displayed in different ways, including tables, charts, pictograms and drawings. A habitat is a place where a living thing lives. A microhabitat is a very small habitat. Simple equipment is used to take measurements and observations. Examples include timers, hand lenses, metre sticks and trundle wheels. 	<p>apex predator. Changes within a food chain, such as an abundance or lack of one food type, have an impact on the entire food chain.</p> <ul style="list-style-type: none"> An adaptation helps an animal or plant survive in its habitat. If living things are unable to adapt to changes within their habitat, they are at risk of becoming extinct. Equipment is used to take measurements in standard units. Examples include data loggers plus sensors, timers (seconds, minutes and hours), thermometers (°C), and metre sticks, rulers or trundle wheels (millimetres, centimetres, metres). Habitats change over time, either due to natural or human influences. Natural influences include extreme or unseasonable weather. Human influences include habitat destruction or pollution. These changes can pose a risk to animals and plants that live in the habitat. Protected Characteristics links to Disability (see Embedding Protected Characteristics Document) <p>Yr3/4 Road Trip USA!</p> <ul style="list-style-type: none"> Electricity is a type of energy. It is used to power many everyday items, such as kettles, computers and televisions. Electricity can also come from batteries. Batteries eventually run out of power and need to be recycled or recharged. Batteries power devices that can be carried around, such as mobile phones and torches. A series circuit is a simple loop with only one path for the electricity to flow. A series circuit must be a complete loop to work and have a source of power from a battery or cell. Electrical components include cells, wires, lamps, motors, switches and buzzers. Switches open and close a circuit and provide control. Electrical conductors allow electricity to flow through them, whereas insulators do not. Common electrical conductors are metals. Common insulators include wood, glass, plastic and rubber. 	<p>Yr4/5 Playlist</p> <ul style="list-style-type: none"> Volume is how loud or quiet a sound is. The harder an instrument is hit, plucked or blown, the stronger the vibrations and the louder the sound. When an instrument is played, the air around or inside it vibrates. These vibrations travel as a sound wave. Sound waves travel through a medium, such as air or water, to the ear. Pitch is how high or low a sound is. Parts of an instrument that are shorter, tighter or thinner produce high-pitched sounds. Parts of an instrument that are longer, looser or fatter produce low-pitched sounds. Sounds are louder closer to the sound source and fainter as the distance from the sound source increases. <p>Y4/5 Sow, Grow and Farm</p> <p>Population changes in a habitat can have significant consequences for food chains and webs.</p> <p>A food web is a set of interconnected food chains that show how animals rely on plants and other animals for food.</p> <p>A life cycle is the series of changes in the life of a living thing and includes these basic stages: birth, growth, reproduction and death. Mammals' life cycles include the stages: embryo, juvenile, adolescent and adult. Amphibians' life cycles include the stages: egg, larva (tadpole), adolescent and adult. Some insects' (butterflies, beetles and bees) life cycles include the stages: egg, larva, pupa and adult. Birds' life cycles include the stages: egg, baby, adolescent and adult.</p> <p>Flowering plants reproduce sexually. The flower is essential for sexual reproduction. Other plants reproduce asexually. Bulbs, corms and rhizomes are some parts used in asexual reproduction in plants.</p> <p>Parts of a flower include the stamen, filament, anther, pollen, carpel, stigma, style, ovary, ovule and sepal. Pollination is when the male part of a plant (pollen) is carried, by wind, insects or other animals, to the female part of the plant (carpel). The pollen travels to the ovary, where it fertilises the ovules (eggs). Seeds are then produced, which disperse far</p>	<p>bar and line charts, classification keys and labelled diagrams.</p> <ul style="list-style-type: none"> The results are information, such as measurements or observations, which have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected. Protected Characteristics links to Pregnancy & Maternity (see Embedding Protected Characteristics Document) Protected Characteristics links to Sex (see Embedding Protected Characteristics Document) Protected Characteristics links to Sexual Orientation (see Embedding Protected Characteristics Document) <p>Yr5/6 Alchemy Island</p> <ul style="list-style-type: none"> Materials can be grouped according to their basic physical properties. Properties include hardness, solubility, transparency, conductivity (electrical and thermal) and magnetism. Some mixtures can be separated by filtering, sieving and evaporating. Sieving can be used to separate large solids from liquids and some solids from other solids. Filtering can be used to separate small solids from liquids. Evaporating can be used to separate dissolved solids from liquids. The results are information, such as measurements or observations, which have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected. Some materials (solutes) will dissolve in liquid (solvents) to form a solution. The solute can be recovered by evaporating off the solvent by heating. An observation involves looking closely at objects, materials and living things. Accurate observations can be made repeatedly or at regular intervals to identify changes over time. A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding.
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- Objects, materials and living things can be looked at, compared and grouped according to their features.
- Tests can be carried out by following a set of instructions. A prediction is a guess at what might happen in an investigation.

away from the parent plant and grow new plants.

A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding.

Farming in the UK can be divided into three main types: arable (growing crops), pastoral (raising livestock), mixed (arable and pastoral). Intensive farming in the past has resulted in the loss of habitats.

Modern farming methods, such as excessive tillage, monoculture, removal of hedgerows, use of synthetic fertilisers and chemical pesticides, irrigation technologies and autumn planting, all impact on wildlife and the natural environment.

- Protected Characteristics links to Age (see Embedding Protected Characteristics Document)
- Protected Characteristics links to Sex (see Embedding Protected Characteristics Document)