

Science Curriculum Overview

The national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

At Whetstone, we use the Rising Stars Switched on Science to deliver the new 2014 Science curriculum and achieve these aims. Children are given the opportunity to share their own knowledge on topics first to enable the teacher to plan appropriate activities to build on and extend this.

KS1

The principal focus of science teaching in KS1 is to enable pupils to experience and observe phenomena, looking more closely at the world around them. In addition to our half termly topics Year 1 and 2 look at seasonal changes across the year mainly through hands on experiences such as collecting leaves in autumn, a spring watch, etc. Children are able to relate to things such as the clothes we wear in different weather and how animals adapt. At this stage children are encouraged to make observations and discuss changes which occur. Children take part in practical investigations working in groups sharing roles and writing up their investigations/findings. They are encouraged to explain what they have found out.

KS2

The principal focus of science teaching in lower key stage 2 is to enable pupils to broaden their scientific view of the world around them. A range of activities are planned and children are encouraged to use scientific vocabulary when writing up investigations and explaining their findings. In upper key stage 2 the principal focus of science teaching is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. Children are involved in their own learning and are encouraged to extend their own knowledge through independent research. Children are encouraged to use detailed explanations and scientific vocabulary and record their findings in a variety of ways.

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	<p>Who am I? (Animals, including humans)</p> <ul style="list-style-type: none"> 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>Everyday Materials (Celebrations)</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 everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties <p>Seasonal Changes (going observations and recording throughout the term)</p> <ul style="list-style-type: none"> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies <p>Working Scientifically</p> <ul style="list-style-type: none"> ask simple questions and recognising that they can be answered in different ways observing closely identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 		<p>On Safari (Animals, including humans)</p> <ul style="list-style-type: none"> identify and name a variety of common animals including birds, fish, amphibians, reptiles and mammals describe & compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) identify and name a variety of common animals that are carnivores, herbivores & omnivores <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>Seasonal Changes (going observations throughout the term)</p> <ul style="list-style-type: none"> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies <p>Working Scientifically</p> <ul style="list-style-type: none"> ask 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 		<p>Holiday (Animals, including humans & Everyday materials)</p> <ul style="list-style-type: none"> identify and name a variety of common animals including birds, fish, amphibians, reptiles and mammals describe & compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) identify and name a variety of common animals that are carnivores, herbivores & omnivores 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 everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties <p>Seasonal Changes (going observations throughout the term, plus an amalgamation of what they have learnt across the year, making comparisons between seasons and generalisations about each season)</p> <ul style="list-style-type: none"> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies <p>Working Scientifically</p> <ul style="list-style-type: none"> ask simple questions and recognising that they can be answered in different ways observing closely identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 	
Year 2	<p>Healthy Me (Animals, including humans)</p> <ul style="list-style-type: none"> notice that animals, including humans, have offspring which grow in to adults find out about and describe the basic needs of animals, 		<p>Mini Worlds (Uses of everyday materials)</p> <ul style="list-style-type: none"> identify and compare the suitability of a 	<p>Move it (Uses of everyday materials)</p> <ul style="list-style-type: none"> find out how the shapes of solid objects made 	<p>Young Gardeners (Plants)</p> <ul style="list-style-type: none"> observe and describe how seeds and bulbs grow in to mature plants find out and describe how plants need water, light and suitable 	

	<p>including humans, for survival (water, food and air)</p> <ul style="list-style-type: none"> describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene <p>Materials Monster (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 particular uses find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching <p>SF – compare, observe, classify, record, explain</p> <p>Working Scientifically</p> <ul style="list-style-type: none"> ask simple questions and recognising that they can be answered in different ways observing closely, using simple equipment identifying and classifying performing simple tests using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 	<p>variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>Working Scientifically</p> <ul style="list-style-type: none"> ask simple questions and recognising that they can be answered in different ways observing closely using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 	<p>from some materials can be changed by squashing, bending, twisting and stretching</p> <p>Working Scientifically</p> <ul style="list-style-type: none"> ask simple questions and recognising that they can be answered in different ways observing closely performing simple tests (comparative tests) using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 	<p>temperature to grow and stay healthy</p> <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 micro-habitats describe how some animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name the different sources of food <p>Working Scientifically</p> <ul style="list-style-type: none"> ask simple questions and recognising that they can be answered in different ways observing closely identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 	
Year 3	<p>Healthy Me (Animals, including humans)</p> <ul style="list-style-type: none"> identify that animals, including humans, need the right types and amounts of nutrition, and that they cannot make their own food; they get nutrition from what they eat identify that humans and some other animals have skeletons and muscles for support, protection and movement <p>Working scientifically</p>	<p>Mirror, mirror (light)</p> <ul style="list-style-type: none"> recognise that they need light in order to see things and that dark is the absence of light notice that light is reflected from surfaces recognise that light from the sun can be dangerous and that there are ways to protect their eyes recognise that shadows are formed when the light from a light source is blocked by a solid object find patterns in the way that the size of shadows 	<p>Earth Rocks (Rocks)</p> <ul style="list-style-type: none"> compare and group together different kinds of rocks on the basis of their appearance and simple physical properties describe in simple terms how fossils are formed when things that have lived are trapped within rock recognise that soils are made from rocks and organic matter <p>Working scientifically</p>	<p>How does your garden grow? (Plants)</p> <ul style="list-style-type: none"> identify and describe the functions of different parts of flowering plants: roots, stem/trunk, 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 	<p>Opposite attract (Forces and Magnets)</p> <ul style="list-style-type: none"> compare how things move on different surfaces notice that some forces need contact between two objects, but magnetic forces can 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 describe magnets as having two poles predict whether two magnets will attract or repel each other, depending on which poles are facing <p>Working scientifically</p> <ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them

<ul style="list-style-type: none"> • 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 	<p>change</p> <p>Working scientifically</p> <ul style="list-style-type: none"> • 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, 	<ul style="list-style-type: none"> • 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 	<p>transported within plants</p> <ul style="list-style-type: none"> • explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal <p>Working scientifically</p> <ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • setting up simple practical enquiries, comparative and fair tests • 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. 	<ul style="list-style-type: none"> • 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.
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	<ul style="list-style-type: none"> identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings. 	<p>similarities or changes related to simple scientific ideas and processes</p> <ul style="list-style-type: none"> using straightforward scientific evidence to answer questions or to support their findings. 	<ul style="list-style-type: none"> using straightforward scientific evidence to answer questions or to support their findings. 	<p>of results and conclusions</p> <ul style="list-style-type: none"> 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. 	
Year 4	<p>Teeth and Eating (Animals, including humans)</p> <ul style="list-style-type: none"> 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 construct & interpret a variety of food chains, identifying producers, predators and prey. <p>Working scientifically</p> <ul style="list-style-type: none"> 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 	<p>Electricity</p> <ul style="list-style-type: none"> identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers 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 	<p>What's that sound? (Sound)</p> <ul style="list-style-type: none"> identify how sounds are made, associating some of them with vibrating recognise that vibrations from sounds travel through a medium to the ear 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 recognise that sounds get fainter as the distance from the sound source increases <p>Working scientifically</p> <ul style="list-style-type: none"> 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 	<p>States of matter</p> <ul style="list-style-type: none"> 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 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>Working scientifically</p> <ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to 	<p>Living things and their habitats</p> <ul style="list-style-type: none"> 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 <p>Working scientifically</p> <ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and

	<p>careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <ul style="list-style-type: none"> 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. 	<p>insulators, and associate metals with being good conductors</p> <p>Working scientifically</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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. 	<p>answer them</p> <ul style="list-style-type: none"> 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 	<p>fair tests</p> <ul style="list-style-type: none"> 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.
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		<p>raise further questions</p> <ul style="list-style-type: none"> identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings. 		support their findings.	
Year 5	<p>Material World (Properties and changes of materials)</p> <ul style="list-style-type: none"> compare and group materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical & thermal) and response to magnets know that some materials 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 and the action of acid on bicarbonate of soda <p>Out of this world (Earth and Space)</p> <ul style="list-style-type: none"> describe the movement of the Earth, and 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>Circle of life (Living things and their habitats)</p> <ul style="list-style-type: none"> Describe the differences in life cycles of a mammal, an amphibian, an insect and a bird describe the life processes of reproduction in some plants and animals <p>Working scientifically</p> <ul style="list-style-type: none"> 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, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, 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 and a degree of trust in results, in oral and written forms such as displays and other presentations <p>identifying scientific evidence that has been used to support or refute ideas or arguments</p>	<p>Let's get moving (Forces)</p> <ul style="list-style-type: none"> explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object identify the effects of air resistance, water resistance and friction, that act between moving surfaces recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect <p>Working scientifically</p> <ul style="list-style-type: none"> planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary 	<p>Growing up and growing old (Animals, including humans)</p> <ul style="list-style-type: none"> Describe the changes as humans develop to old age <p>Working scientifically</p> <ul style="list-style-type: none"> 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, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and 	

	<p>Working scientifically</p> <ul style="list-style-type: none"> 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, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, 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 and a degree of trust in 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 			<ul style="list-style-type: none"> taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, 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 and a degree of trust in results, in oral and written forms such as displays and other presentations <p>identifying scientific evidence that has been used to support or refute ideas or arguments</p>	<p>fair tests</p> <ul style="list-style-type: none"> reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations <p>identifying scientific evidence that has been used to support or refute ideas or arguments</p>	
Year 6	<p>Working scientifically</p> <ul style="list-style-type: none"> 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 	<p>We're evolving! (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 earth millions of years ago recognise that living things produce offspring of the same kind, but normally offspring vary & are not 	<p>Let it shine (Light)</p> <ul style="list-style-type: none"> recognise 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 eye explain that we see things because light travels from 	<p>Electrifying! (Electricity)</p> <ul style="list-style-type: none"> associate the brightness of a lamp of 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 	<p>Classifying critters (Living things and their habitats)</p> <ul style="list-style-type: none"> Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants & animals give reasons for 	<p>Staying alive (Animals, including humans)</p> <ul style="list-style-type: none"> identify & name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood recognise the impact of diet, exercise, drugs & lifestyle on the way their body functions

	<p>and precision, taking repeat readings when appropriate</p> <ul style="list-style-type: none"> recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, 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 and a degree of trust in results, in oral and written forms such as displays and other presentations <p>identifying scientific evidence that has been used to support or refute ideas or arguments</p>	<ul style="list-style-type: none"> identical to their parents identify how animals & plants are adapted to suit their environment in different ways and that adaptation may lead to evolution <p>SF – observe, compare, explain</p> <p>Working scientifically</p> <ul style="list-style-type: none"> 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, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, 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 and a degree of trust in results, in oral and written forms such as displays and other 	<p>light sources to our eyes or from light sources to objects and then to our eyes</p> <ul style="list-style-type: none"> use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them <p>Working scientifically</p> <ul style="list-style-type: none"> 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, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, 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 and a degree of trust in results, in oral and written forms such as displays and other 	<p>position of switches</p> <ul style="list-style-type: none"> use recognised symbols when representing a simple circuit in a diagram <p>Working scientifically</p> <ul style="list-style-type: none"> 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, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, 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 and a degree of trust in results, in oral and written forms such as displays and other presentations <p>identifying scientific evidence that has been used to support or refute ideas or arguments</p>	<p>classifying plants and animals based on specific characteristics</p> <p>Working scientifically</p> <ul style="list-style-type: none"> 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, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, 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 and a degree of trust in results, in oral and written forms such as displays and other presentations <p>identifying scientific evidence that has been used to support or refute ideas or arguments</p>	<ul style="list-style-type: none"> describe the ways in which nutrients & water are transported within animals, including humans <p>Working scientifically</p> <ul style="list-style-type: none"> 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, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, 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 and a degree of trust in results, in oral and written forms such as displays and other presentations <p>identifying scientific evidence that has been used to support</p>
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		presentations identifying scientific evidence that has been used to support or refute ideas or arguments	presentations identifying scientific evidence that has been used to support or refute ideas or arguments			or refute ideas or arguments
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