

Science Subject Progression Document

Subject: Subject

Topic: Animals including humans

Year Group/ Cycle: Year 1

Skills Revisited	Topic
Explores the natural world and makes observations. Explains how things work and why things might happen.	EYFS -Understanding the world. Communication and language.
Knowledge Revisited	
Draws pictures of animals and plants. Verbally what they can see, hear and smell in the world around them.	EYFS -Understanding the world.
Skills	
Identifying and classifying Asking their own questions. Sorting and grouping depending on different properties/criteria.	
Knowledge	
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. Identify, name and draw/label the basic parts of a human body and say which part of the body is associated with each sense.	
Revisited from Cycle _____	Topic

Subject: Science

Topic: Plants

Year Group/ Cycle: Year 1

Skills Revisited	Topic

Makes observations and draws pictures of animals and plants.	EYFS – exploring of the world.
Knowledge Revisited	
Explore the natural world around them. Knows similarities and differences in the natural world. Describes what they have heard and seen when outside.	EYFS – exploring of the world.
Skills	
Make observations and record their findings about plants growing in their local environment. Observe carefully using a magnifying glass. Draw diagrams showing the different part of the plant. Keep records of how plants change over time.	
Knowledge	
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. Answer questions about plants growing in their local habitat. Name parts of a tree and plant.	
Revisited from Cycle ____	Topic

Subject: Science

Topic: Everyday materials

Year Group/ Cycle: Year 1

Skills Revisited	Topic
Safely uses and explores a variety of materials, tools and techniques.	EYFS – Expressive art and design.
Knowledge Revisited	

Can name different material they are using.	EYFS – Expressive art and design.
Skills	
Identifying and classifying. Asking simple questions and recognising that they can be asked in different ways. Conduct simple test. Record answers in different ways.	
Knowledge	
Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials. Describe the simple physical properties of a variety of everyday objects. Describe the physical properties of a variety of everyday materials. Group and compare materials based on their different properties, using appropriate scientific vocabulary. Explore the properties of different materials and use appropriate scientific language to discuss what they found out.	
Revisited from Cycle ____	Topic

Subject: Subject
Topic: Animals including humans
Year Group/ Cycle: Year 2

Skills Revisited	Topic
Explores the natural world and makes observations. Explains how things work and why things might happen. Identifying and classifying	EYFS -Understanding the world. Communication and language. Year 1 – Animals including humans

Asking their own questions. Sorting and grouping depending on different properties/criteria.	
Knowledge Revisited	
<p>Draws pictures of animals and plants. Verbally what they can see, hear and smell in the world around them.</p> <p>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. Identify, name and draw/label the basic parts of a human body and say which part of the body is associated with each sense.</p>	<p>EYFS -Understanding the world.</p> <p>Year 1 – Animals including humans.</p>
Skills	
<p>Identifying and classifying. Observing through videos or first-hand experience. Asking some of their own questions and thinking of their own ways to find out the answers.</p>	
Knowledge	
<p>Notice that animals, including humans have offspring which grow into adults. Name and identify these. Describe the basic needs of animals, including humans, for survival. Describe the importance for humans of exercise, eating a range of different foods and hygiene. Start to introduce processes of reproduction and growth in animals (basic). Growing into adults.</p>	
Revisited from Cycle ____	Topic

Subject: Science

Topic: Plants

Year Group/ Cycle: Year 2

Skills Revisited	Topic
<p>Makes observations and draws pictures of animals and plants.</p> <p>Make observations and record their findings about plants growing in their local environment. Observe carefully using a magnifying glass. Draw diagrams showing the different part of the plant. Keep records of how plants change over time.</p>	<p>EYFS – exploring of the world.</p> <p>Year 1 - Plants</p>
Knowledge Revisited	

<p>Explore the natural world around them. Knows similarities and differences in the natural world. Describes what they have heard and seen when outside.</p> <p>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. Answer questions about plants growing in their local habitat. Name parts of a tree and plant.</p>	<p>EYFS – exploring of the world.</p> <p>Year 1 - Plants</p>
Skills	
<p>Observe closely using simple equipment. Record, with some accuracy, the growth in a variety of plants as they change over time. Set up a comparative test to show growth over time. Ask and answer questions by gathering data.</p>	
Knowledge	
<p>Describe how seeds and bulbs grow into mature plants. Describe how plants need water, light and suitable temperature to grow and stay healthy. Start to think about germination is needed for a plant's survival, as well as reproduction and growth in plants.</p>	
Revisited from Cycle ____	Topic

Subject: Science

Topic: Use of everyday materials

Year Group/ Cycle: Year 2

Skills Revisited	Topic
<p>Safely uses and explores a variety of materials, tools and techniques.</p> <p>Identifying and classifying. Asking simple questions and recognising that they can be asked in different ways. Conduct simple tests. Record answers in different ways.</p>	<p>EYFS – Expressive art and design.</p> <p>Year 1 – Everyday materials</p>
Knowledge Revisited	
<p>Can name different materials they are using.</p> <p>Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials. Describe the simple physical properties of a variety of everyday objects.</p>	<p>EYFS – Expressive art and design.</p> <p>Year 1 – Everyday materials</p>

Describe the physical properties of a variety of everyday materials. Group and compare materials based on their different properties, using appropriate scientific vocabulary. Explore the properties of different materials and use appropriate scientific language to discuss what they found out	
Skills	
Observe closely. Compare and group everyday materials. Classify everyday material around the school.	
Knowledge	
Identify and compare the suitability of a variety of everyday materials for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Describe how materials can be used to make more than one object and give some examples. Name examples of everyday objects and what they are made from. Start to explain why certain objects are made out of that material.	
Revisited from Cycle ____	Topic

Subject: Science

Topic: States of Matter

Year Group/ Cycle: Year 3 and 4 Cycle B

Skills Revisited	Topic
Making observations about the world around them.	EYFS
Observing closely using simple equipment. Recording information in different ways.	Seasonal change Year 1 KS1 working skills
Knowledge Revisited	
Weather and the seasons. Evaporation – linked to puddles in the summer. Links to everyday materials and what they are used for and their properties. Language – bending, stretching.. Comparing the uses of different materials.	Year 1 Everyday materials Yr1 Uses of everyday materials Yr2
Skills	
Compare and group materials. Setting up practice enquiries and fair tests	

Make systematic and careful observations and take accurate measurements using standard units using a range of equipment including thermometers and data loggers. Recording workings in different ways including tables and graphs.

Knowledge

Identify the properties of a liquid, gas and solid.
 That some materials change state when they are heated or cooled.
 Know the temperature at which these changes take place.
 Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
 Describe different states of matter.

Revisited from Cycle _____

Topic

Subject: Science

Topic: Sound

Year Group/ Cycle: Year 3 and 4 A

Skills Revisited

Topic

Knowledge Revisited

Knowledge of different musical instruments.

Skills

Make noises in different ways and using different instruments.
 Setting up practical enquiries and making changes to ensure it is a fair test.
 Draw conclusions and report on findings from enquiries in different ways.

Knowledge

Identify how sound is made, associating some of them with something vibrating.
 Recognise that vibrations from sound travels through a medium to the ear.
 Find patterns between the pitch of a sound and features of the object that produces it.
 Make links between the volume of a sound and the strength of the vibrations that produced it.
 Know that sound gets fainter as the distance from the sound source increases.
 Name different musical instruments from around the world and start to find out how pitch and volume can be changed in different ways.
 Know ways of insulating from sound.

Revisited from Cycle _____

Topic

Subject: Science

Topic: Living things and their habitats

Year Group/ Cycle: Year 3 and 4 A

Skills Revisited	Topic
<p>Make observations of flowers that they have planted and record these. Draw diagrams and label accurately.</p> <p>Describe and compare</p> <p>Group different animals and plants Record findings using charts. Sorting and classifying</p>	<p>Year 1 Plants</p> <p>Year 1 Animals including humans</p> <p>Year 2 Living things and their habitats.</p>
Knowledge Revisited	
<p>Identify and name a variety of common and wild garden plants. Identify and describe the basic structure of common flowering plants and trees. Name the different part of a plant structure.</p> <p>Identify a variety of different animals including fish, amphibians, reptiles and birds. Name different carnivores, herbivores and omnivores.</p> <p>Describe how things are suited to their habitats. Identify and name a variety of plants, animals, habitats, including microhabitats. Explain how they know things are alive, dead or never alive and give examples.</p>	<p>Year 1 Plants</p> <p>Year 1 Animals including humans</p> <p>Year 2 Living things and their habitats</p>
Skills	
<p>Group living things in a variety of different ways. Use simple guides of keys to explore and identify local plants and animals. Raising and answering questions based on their observations. Researching animals Making links to the local community and wider world.</p>	
Knowledge	
<p>Explore the use of different classification keys to help to group, identify and name a variety of living things in their local and wider environment. Explain how environments can change and explain how this can cause issues or danger towards living things. Group plants into categories such as flowering, ferns, mosses... Identify animals and plants living in the habit of the school grounds and how these change throughout the year. Put vertebrate animals into different groups using the correct terminology. Think about the human impact on animals both positive and negative. Know the names of scientists that have had an impact on this area of science.</p>	
Revisited from Cycle ____	Topic

Subject: Science
Topic: Electricity
Year Group/ Cycle: Year 3 and 4 Cycle A

Skills Revisited	Topic
Ask and answer questions and recognise that they can be answered in different ways. Comparing different materials Recording observations. Using simple equipment to carry out tests.	KS1
Knowledge Revisited	
Distinguish between an object and the material from which it was made. Describe the properties of everyday materials. Describe the simple physical properties of a variety of everyday materials. Become familiar with how materials are used for more than one thing. The suitability of different materials for different objects. Classifying different materials.	Everyday materials Year 1. Uses of everyday materials Year 2
Skills	
Setting up simple practice enquires, comparative and fair texts. Making observations including patterns. Record results in different ways. Ask and answer questions. Using straightforward evidence to answer questions or support findings.	
Knowledge	
That commonly found appliances run on electricity. Identify and name the parts of a circuit Know how to construct a simple circuit. Complete a loop using a switch and a lamp and predict if it will work. Recognise that a switch opens and closes a circuit based on whether or not a lamp lights up. Name and recognise simple conductor and insulators, and associate metals with being good conductors. Use scientific language correctly to explain how a circuit works.	
Revisited from Cycle _____	Topic

Subject: Science
Topic: Light
Year Group/ Cycle: Year 3 and 4 Cycle B

Skills Revisited	Topic
<p>Asking questions and gathering data to be able to answer these questions</p> <p>Observing closely and suggest answers to questions.</p> <p>Performing simple tests</p> <p>Oral and written explanations. Displays or presentations of results or conclusions.</p>	<p>Working scientifically objectives previous year group.</p> <p>Light</p>
Knowledge Revisited	
<p>It is not safe to look at the sun even while wearing dark glasses.</p> <p>Length of days and seasonal changes.</p> <p>Making links to different materials and their properties.</p> <p>Everyday uses of these materials.</p>	<p>Seasonal changes</p> <p>Uses of everyday materials (Covered in year 1 and 2).</p>
Skills	
<p>Look for patterns in what happens to shadows when the light source is moved or the distance between the light source and the object changes.</p> <p>Recording findings and presenting them in different ways.</p> <p>Draw simple conclusions, make predictions, suggest improvement and raise further questions.</p> <p>Use evidence to support findings.</p> <p>Raise questions about the world around them.</p> <p>Setting up practical enquiries.</p>	
Knowledge	
<p>That they need light in order to see things and that dark is the absence of light.</p> <p>Light is reflected from surfaces.</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p> <p>Shadows are formed when the light from a light source is blocked by an opaque object.</p> <p>Understand that the size of a shadow changes depending on its position.</p> <p>Answer questions about how light behaves.</p> <p>Explore what happens when light is reflected off different objects.</p> <p>Make links to other places in the world and famous scientists and are/have been in this area of science.</p>	
Revisited from Cycle ____	Topic

Subject: Science

Topic: Rocks and Soils

Year Group/ Cycle: 3 and 4 Cycle A

Skills Revisited	Topic
<p>Identify and classify.</p> <p>Using observations and ideas to suggest answers to questions</p>	<p>Working scientifically objectives year ½</p> <p>Light and forces</p>

Oral and written explanations. Displays or presentations of results or conclusions.	
Knowledge Revisited	
Life cycle of plants – link to how soil is made up of plants Different habits for plants to grow and what they need from the soil. Life cycle and processes of animals – link to new knowledge of how this affects make up of soil.	Plants KS1 Animals including humans KS1
Skills	
Use a microscope or hand lens to help to identify and classify different kinds of rocks. Raise questions about the way that rocks are formed. Making careful observations to be able to sort and classify different rocks. Presenting information in different ways.	
Knowledge	
Know the properties of different kinds of rocks and what they look like and group them using this knowledge. Describe how fossils are formed when things that have lived are trapped within rock. Recognise that soils are made from rocks and organic matter. Explore different kinds of rock including the types of rocks in their natural environment. The everyday uses to rocks and how this may have changed over time. Start to think about the way in which different rocks are formed. Start to realise that rocks behave in different ways when rubbed together or when exposed to water. Make links to other places in the world and famous scientists and are/have been in this area of science.	
Revisited from Cycle ____	Topic

Subject: Science

Topic: Forces and Magnets

Year Group/ Cycle: Year 3 and 4/ Cycle B

Skills Revisited	Topic
Asking questions and using different types of scientific enquiries to answer them. Setting up practice enquiries and conducting a fair test. Classifying different materials Observing closely and classifying the uses of different materials.	Working scientifically objectives KS1
Knowledge Revisited	
Properties of materials and their everyday uses.	Materials KS1

Classifying materials and criteria in which this can be done, People who have invented useful materials.	
Skills	
<p>Comparing how different things move and grouping them. Raising questions and carrying out tests to find out how far things move on different surfaces. Gathering and recording data to find answers to questions. Exploring the strengths of different magnets and finding a fair way to compare them. Looking for patterns. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Oral and written explanations. Displays or presentations of results or conclusions.</p>	
Knowledge	
<p>Understand that things move faster and slower on different surfaces. Notice that some forces need contact between them but that magnetic forces can act at a distance. Conducts tests to explore this. Think about the behaviour of everyday objects, pushing a swing, opening a door. Magnetic forces attract and repel each other and attract some materials but not others. Understand which materials are which are not magnetic Describe magnets as having poles and making connections to the world. Use the appropriate scientific vocabulary to describe these things. Make links to other places in the world and famous scientists and are/have been in this area of science.</p>	
Revisited from Cycle A	Topic

Subject: Science

Topic: Plants

Year Group/ Cycle: Year 3 and 4 Cycle B

Skills Revisited	Topic
<p>Explores the natural world and makes observations and drawing pictures of plants.</p> <p>Observing carefully, using simple equipment. Identifying, classifying and grouping different plants. Drawing diagrams. Asking and answering questions.</p>	<p>EYFS – understanding the word</p> <p>Plants KS1</p>
Knowledge Revisited	
<p>How seeds and bulbs and seeds grow into mature plants. What plants need to survive. Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p>	Plants KS1

Identify and describe the structure of a variety of common flowering plants and trees.	
Skills	
Setting up practical enquiries and comparative tests. Labelled diagrams Using straightforward scientific evidence to answer questions or to support their findings Asking and answering questions. Record what they have found out in different ways.	
Knowledge	
Identify and describe the functions of different parts of a flowering plant; root, stem/trunk, leaves and flowers. The requirements of plants for life and growth. The way in which water is transported within plants. Parts of a flower that play a part in the life cycle of flowering plants. Know that every part of the flower has a job to do. Plants make their own food. The effect that different factors have on a plant's growth. Seed dispersal of different kinds of flowers. Make links to different areas of the world and scientists that have had an impact on this area of science.	
Revisited from Cycle ____	Topic

Subject: Science

Topic: Animals including humans

Year Group/ Cycle: Year 3 and 4 Cycle B

Skills Revisited	Topic
Identify and classify Using observations and ideas to suggest answers to questions Describe how they identify different animals sort them into different groups. Measuring of growth.	Working scientifically objectives KS1
Knowledge Revisited	
Identify carnivores, herbivores and omnivores. Identify and name a variety of common animals including fish, amphibians, fish, reptiles, birds and mammals. Draw the basic parts of the body and say which part of the body is associated with each sense. Habits of different animals and the local environment	Animals including humans Year 1
Animals have offspring that turn into adults. Basic needs to animals including humans. The importance of hygiene, exercise, eating different foods.	Animals including humans Year 2

Skills	
<p>Compare the teeth of different animals and classify them depending on their findings. Draw simple conclusions and make predictions. Label diagrams and draw pictures. Ask and answer questions. Suggest ways in which they can answer their own questions.</p>	
Knowledge	
<p>Identify that all animals, including humans need nutrition, that they cannot make their own food; that they get their nutrition from what they eat. That humans and some other animals have skeletons and muscles for support, protection and movement. The main body parts that are associated with skeleton and muscles, finding out how different parts of the body have special functions. Understand that humans and other animals need different food in order to stay healthy. Describe the basic parts of the digestive system in humans. Identify the different types of teeth in humans and what their functions are. Understand what a food chain is and explore this for different animals.</p>	
Revisited from Cycle _____	Topic

Subject: Science

Topic: Living things and their habitats

Year Group/ Cycle: Year 5 and 6 Cycle A

Skills Revisited	Topic
<p>Group living things in a variety of different ways. Use simple guides of keys to explore and identify local plants and animals. Raising and answering questions based on their observations. Researching animals Making links to the local community and wider world.</p>	<p>Living things and their habitats Year 3 and 4</p>
Knowledge Revisited	
<p>Explore the use of different classification keys to help to group, identify and name a variety of living things in their local and wider environment. Explain how environments can change and explain how this can cause issues or danger towards living things. Group plants into categories such as flowering, ferns, mosses... Identify animals and plants living in the habit of the school grounds and how these change throughout the year. Put vertebrate animals into different groups using the correct terminology. Think about the human impact on animals both positive and negative.</p>	<p>Living things and their habitats Year 3 and 4</p>

Know the names of scientists that have had an impact on this area of science.	
Skills	
<p>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> <p>identifying scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Grow different kinds of plants from different parts of the parent plant and make observations about what happens.</p>	
Knowledge	
<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p> <p>Describe the life process of reproduction in some plants and animals.</p> <p>They should observe life-cycle changes in a variety of living things, for example, plants in the vegetable garden or flower border, and animals in the local environment. They should find out about the work of naturalists and animal behaviourists, for example, David Attenborough and Jane Goodall.</p> <p>Pupils should find out about different types of reproduction, including sexual and asexual reproduction in plants, and sexual reproduction in animals.</p>	
Revisited from Cycle __B__	Topic

Subject: Science

Topic: Light

Year Group/ Cycle: Year 5 and 6 Cycle A

Skills Revisited	Topic
<p>Look for patterns in what happens to shadows when the light source is moved or the distance between the light source and the object changes.</p> <p>Recording findings and presenting them in different ways.</p> <p>Draw simple conclusions, make predictions, suggest improvement and raise further questions.</p> <p>Use evidence to support findings.</p> <p>Raise questions about the world around them.</p> <p>Setting up practical enquiries.</p>	Light Year 3 and 4
Knowledge Revisited	
<p>That they need light in order to see things and that dark is the absence of light.</p> <p>Light is reflected from surfaces.</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p>	Light Year 3 and 4

<p>Shadows are formed when the light from a light source is blocked by an opaque object.</p> <p>Understand that the size of a shadow changes depending on its position.</p> <p>Answer questions about how light behaves.</p> <p>Explore what happens when light is reflected off different objects.</p> <p>Make links to other places in the world and famous scientists and are/have been in this area of science.</p>	
Skills	
<p>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> <p>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why.</p> <p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p>	
Knowledge	
<p>Recognise that light appears to travel in straight lines.</p> <p>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.</p> <p>Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p> <p>They could extend their experience of light by looking a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters.</p>	
Revisited from Cycle <u> B </u>	Topic

Subject: Science

Topic: Evolution and inheritance

Year Group/ Cycle: Year 5 and 6 Cycle A

Skills Revisited	Topic
<p>Raise questions about the way that rocks are formed.</p> <p>Making careful observations to be able to sort and classify different rocks.</p> <p>Presenting information in different ways.</p> <p>Asking relevant questions and using different types of scientific enquiries to answer them.</p>	Rocks Year 3 and 4
Knowledge Revisited	

Describe how fossils are formed when things that have lived are trapped within rock. Recognise that soils are made from rocks and organic matter. Recognise that environments can change and that this can sometimes pose dangers to living things. 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.	Rocks Year 3 and 4 Living things and their habitats Year 4 and 4
Skills	
Analyse the advantages and disadvantages of specific adaptations, such as being on 2 feet rather than 4, having a long or a short beak, having gills or lungs, tendrils on climbing plants, brightly coloured and scented flowers. Observing and raising questions about local animals and how they are adapted to their environment; comparing how some living things are adapted to survive in extreme conditions. Identifying scientific evidence that has been used to support or refute ideas or arguments.	
Knowledge	
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. Pupils might find out about the work of palaeontologists such as Mary Anning and about how Charles Darwin and Alfred Wallace developed their ideas on evolution.	
Revisited from Cycle __B__	Topic

Subject: Science

Topic: Electricity

Year Group/ Cycle: Year 5 and 6

Skills Revisited	Topic
Setting up simple practice enquires, comparative and fair texts. Making observations including patterns. Record results in different ways. Ask and answer questions. Using straightforward evidence to answer questions or support findings.	Year 3 and 4 Electricity unit
Knowledge Revisited	

<p>That commonly found appliances run on electricity. Identify and name the parts of a circuit Know how to construct a simple circuit. Complete a loop using a switch and a lamp and predict if it will work. Recognise that a switch opens and closes a circuit based on whether or not a lamp lights up. Name and recognise simple conductor and insulators, and associate metals with being good conductors. Use scientific language correctly to explain how a circuit works.</p>	<p>Year 3 and 4 Electricity unit</p>
<p>Skills</p>	
<p>Systematically identifying the effect of changing one component at a time in a circuit; designing and making a set of traffic lights, a burglar alarm or some other useful circuit. Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p>	
<p>Knowledge</p>	
<p>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 Use recognised symbols when representing a simple circuit in a diagram</p>	
<p>Revisited from Cycle __B__</p>	<p>Topic</p>

Subject: Science

Topic: Properties and changes in materials

Year Group/ Cycle: Year 5 and 6 Cycle B

<p>Skills Revisited</p>	<p>Topic</p>
<p>Compare and group materials. Setting up practice enquiries and fair tests Make systematic and careful observations and take accurate measurements using standard units using a range of equipment including thermometers and data loggers. Recording workings in different ways including tables and graphs.</p>	<p>States of matter Year 3 and 4</p>
<p>Knowledge Revisited</p>	
<p>Identify the properties of a liquid, gas and solid. That some materials change state when they are heated or cooled. Know the temperature at which these changes take place. Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. Describe different states of matter.</p>	<p>States of matter Year 3 and 4</p>

Skills	
<p>Research and discuss how chemical changes have an impact on our lives. 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.</p>	
Knowledge	
<p>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. 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 Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. They should find out about how chemists create new materials, for example, Spencer Silver, who invented the glue for sticky notes or Ruth Benerito, who invented wrinkle-free cotton. 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>	
Revisited from Cycle __B__	Topic

Subject: Science

Topic: Forces

Year Group/ Cycle: Year 5 and 6 Cycle B

Skills Revisited	Topic
<p>Comparing how different things move and grouping them. Raising questions and carrying out tests to find out how far things move on different surfaces. Gathering and recording data to find answers to questions. Exploring the strengths of different magnets and finding a fair way to compare them. Looking for patterns. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Oral and written explanations. Displays or presentations of results or conclusions.</p>	<p>Forces and Magnets Year 3 and 4</p>

Knowledge Revisited	
<p>Understand that things move faster and slower on different surfaces. Notice that some forces need contact between them but that magnetic forces can act at a distance. Conducts tests to explore this. Think about the behaviour of everyday objects, pushing a swing, opening a door. Magnetic forces attract and repel each other and attract some materials but not others.</p> <p>Understand which materials are which are not magnetic</p> <p>Describe magnets as having poles and making connections to the world.</p> <p>Use the appropriate scientific vocabulary to describe these things. Make links to other places in the world and famous scientists and are/have been in this area of science.</p>	Forces and Magnets Year 3 and 4
Skills	
<p>Exploring falling paper cones or cupcake cases, and designing and making a variety of parachutes and carrying out fair tests to determine which designs are the most effective. They might explore resistance in water by making and testing boats of different shapes. They might design and make products that use levers, pulleys, gears and/or springs and explore their effects.</p> <p>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Using test results to make predictions to set up further comparative and fair tests.</p>	
Knowledge	
<p>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.</p> <p>Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.</p> <p>Pupils might find out how scientists, for example, Galileo Galilei and Isaac Newton helped to develop the theory of gravitation.</p>	
Revisited from Cycle __B__	Topic

Subject: Science

Topic: Earth and Space

Year Group/ Cycle: Year 5 and 6 Cycle B

Skills Revisited	Topic
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<p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering 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>	<p>Year 3 and 4 working scientifically</p>
<p>Knowledge Revisited</p>	
<p>observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies Pupils should be warned that it is not safe to look directly at the sun, even when wearing dark glasses.</p>	<p>Seasons – Year 1</p>
<p>Skills</p>	
<p>Identifying scientific evidence that has been used to support or refute ideas or arguments. 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.</p>	
<p>Knowledge</p>	
<p>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. Pupils should be introduced to a model of the sun and Earth that enables them to explain day and night. Pupils should learn that the sun is a star at the centre of our solar system and that it has 8 planets. Pupils should find out about the way that ideas about the solar system have developed, understanding how the geocentric model of the solar system gave way to the heliocentric model by considering the work of scientists such as Ptolemy, Alhazen and Copernicus.</p>	
<p>Revisited from Cycle __B__</p>	<p>Topic</p>