



Science



Collingbourne CE Primary School  
Progression of Knowledge and Skills  
Science Cycle A

Year	Knowledge	Skills																							
<b>Reception Throughout the year</b>	<p><b>Focus: Changing Seasons</b></p> <p><b>Early Years Outcomes (Development Matters)</b>            Explore the natural world around them            Describe what they see, hear and feel whilst outside            Understand the effects of changing seasons on the natural world around them</p> <p><b>ELG: Understanding the World – The Natural World</b>            Explore the natural world around them, making observations and drawing pictures of animals and plants            Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter</p> <p><b>Contributing towards:</b> Y1 Seasonal Changes</p>	<p>Beginning to share ideas and suggestions about what to do when working practically.</p> <p>Beginning to make guesses about what might happen.</p> <p>Commenting on what they see and hear in the natural world.</p> <p>Using non-standard units to measure.</p> <p>Drawing and labelling pictures of plants and animals.</p> <p>Recognising that tables can be used to record information.</p> <p>With support, grouping objects, plants and animals.</p>																							
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<b>Reception Terms 1 and 2</b>	<p><b>Focus: Animal Adventures</b></p> <p><b>Early Years Outcomes (Development Matters)</b> Explore the natural world around them Describe what they see, hear and feel whilst outside Recognise some environments that are different to the one in which they live</p> <p><b>ELG: Understanding the World – The Natural World</b> 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</p> <p><b>Contributing towards:</b></p>	<p>With support, asking questions about the natural world.</p> <p>Commenting on what they see and hear in the natural world.</p> <p>Drawing and labelling pictures of plants and animals.</p> <p>With support, grouping objects, plants and animals.</p>																					
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Reception Term 3 and 4	<p><b>Focus: I am a Scientist</b></p> <p><b>Early Years Outcomes (Development Matters)</b> Explore the natural world around them</p> <p><b>ELG: Understanding the World – The Natural World</b> Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter</p> <p><b>Contributing towards:</b> Y3 Forces and Magnets, Y3 Light and Shadows, Y4 Sound and Vibration, Y4 States of Matter</p>	<p>Asking questions about the natural world with support.</p> <p>Beginning to share ideas and suggestions when working practically.</p> <p>Beginning to make guesses about what might happen.</p> <p>Commenting on what they see and hear in the natural world.</p> <p>Grouping objects, plants and animals with support.</p> <p>Describing their discoveries when working practically.</p>																					
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Reception Term 5 and 6	<p><b>Focus: Our Beautiful Planet</b></p> <p><b>Early Years Outcomes (Development Matters)</b> Explore the natural world around them Describe what they see, hear and feel whilst outside</p> <p><b>ELG: Understanding the World – The Natural World</b> Explore the natural world around them, making observations and drawing pictures of animals and plants. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter</p> <p><b>Contributing towards:</b> Y1 Everyday materials</p>	<p>Commenting on what they see and hear in the natural world.</p> <p>Recognising that information can be found online and in books.</p> <p>Drawing and labelling pictures of plants and animals.</p>				
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	<b>2: Plants</b> To identify and name plants	<b>Different plants have different names</b>	<b>Flower</b> - The flowering part of a plant <b>Leaf</b> - The part where photosynthesis happens		
	<b>3. Exploring Plant Parts</b> To identify and name plant parts	<b>Different parts of plants have different names</b>	<b>Roots</b> - The part that's underground <b>Stem</b> - The part that joins the leaves and flower to the roots		
	<b>4. Planting Seeds</b> To explore what helps seeds grow	<b>Sunshine (light and heat) and water will help seeds germinate and grow</b>	<b>Seed</b> - Produced by a plant in order to reproduce <b>Germinate</b> - When a seed begins to grow a shoot		
	<b>5. Caring for the Earth</b> To recognise some ways to look after the planet	<b>It is everyone's job to look after the planet</b>	<b>Care</b> - To look after <b>Earth</b> - The planet we live on		
	<u>Assessment Tasks</u>	<u>Assessing Sticky Knowledge</u> <b>What could you do to look after the world?</b>	<u>Assessing Key Vocabulary and Definition</u> Children to be observed using the key vocab while doing the tasks.		

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<b>Year 1/2</b> <b>Autumn 1</b> <b>Cycle A</b>	<p><b>Focus: Plants-Introduction to Plants</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working Scientifically</b>  asking simple questions and recognising that they can be answered in different ways.  observing closely, using simple equipment.  performing simple tests.  identifying and classifying.  using their observations and ideas to suggest answers to questions.  gathering and recording data to help in answering questions.</p> <p><b>Scientific Knowledge and Understanding</b>  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> <p><b>Prior Learning: First unit</b></p>	<p>Posing questions</p> <p>Exploring the world around them and raising their own simple questions.  Recognising there are different types of enquiry (ways to answer a question).  Responding to suggestions on how to answer questions.</p> <p><b>Planning</b>  With support, deciding if suggested observations are suitable.  Ordering a simple method.</p> <p><b>Predicting</b>  Suggesting what might happen, often justifying with personal experience.</p> <p><b>Observing (qualitative data)</b>  Using their senses to describe, in simple terms, what they notice or what has changed.</p> <p><b>Measuring (quantitative data)</b>  Using non-standard units to measure and compare.</p> <p><b>Researching</b>  Gathering specific information from one simplified, specified source</p> <p><b>Recording (diagrams)</b>  Drawing and labelling simple diagrams.</p> <p><b>Recording (tables)</b>  Using a prepared table to record results including: numbers; simple observations.</p> <p><b>Grouping and classifying</b>  Grouping based on visible characteristics.</p> <p><b>Analysing and drawing conclusions</b>  Using their results to answer simple questions.  Beginning to recognise when results or observations do not match their predictions.</p>																					
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<b>Year 1/2</b> <b>Autumn 2</b> <b>Cycle A</b>	<p><b>Focus: Forces and Space-Seasonal Change</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working Scientifically</b>  asking simple questions and recognising that they can be answered in different ways.  observing closely, using simple equipment.  gathering and recording data to help in answering questions.</p> <p><b>Scientific Knowledge and Understanding</b>  observe changes across the four seasons.  observe and describe weather associated with the seasons and how day length varies.</p> <p><b>Prior Learning: First unit</b></p>	<p><b>Posing questions</b>  Exploring the world around them and raising their own simple questions.</p> <p><b>Predicting</b>  Suggesting what might happen, often justifying with personal experience.</p> <p><b>Observing (qualitative data)</b>  Using their senses to describe, in simple terms, what they notice or what has changed.</p> <p><b>Researching</b>  Gathering specific information from one simplified, specified source.</p> <p><b>Recording (tables)</b>  Using a prepared table to record tally frequency.</p> <p><b>Graphing</b>  Representing data using pictograms.</p> <p><b>Analysing and drawing conclusions</b>  Using their results to answer simple questions.</p>																					
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<p style="text-align: center;"><b>Year 1/2 Spring 1 Cycle A</b></p>	<p><b>Focus: Living things- Habitats</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working Scientifically</b> asking simple questions and recognising that they can be answered in different ways. identifying and classifying. gathering and recording data to help in answering questions.</p> <p><b>Scientific Knowledge and Understanding</b> explore and compare the differences between things that are living, dead, and things that have never been alive. identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. identify and name a variety of plants and animals in their habitats, including microhabitats. describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p> <p><b>Prior Learning: First unit</b></p>	<p><b>Posing questions</b> Exploring the world around them and raising their own simple questions. Recognising there are different types of enquiry (ways to answer a question).</p> <p><b>Researching</b> Gathering specific information from one simplified, specified source.</p> <p><b>Recording (tables)</b> Using a prepared table to record results, including simple observations.</p> <p><b>Grouping and classifying</b> Grouping based on visible characteristics.</p>																					
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<b>Year 1/2 Spring 2 Cycle A</b>	<p><b>Focus: Animals including Humans – Life cycles and health</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working Scientifically</b>  asking simple questions and recognising that they can be answered in different ways.  observing closely, using simple equipment.  identifying and classifying.  using their observations and ideas to suggest answers to questions.  gathering and recording data to help in answering questions.</p> <p><b>Scientific Knowledge and Understanding</b>  notice that animals, including humans, have offspring which grow into adults.  find out about and describe the basic needs of animals, including humans, for survival (water, food and air).  describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p> <p><b>Prior Learning: Animals including Humans – Comparing Animals</b></p>	<p>Posing questions</p> <p>Recognising there are different types of enquiry (ways to answer a question).</p> <p><b>Measuring (quantitative data)</b></p> <p>Beginning to use standard units and read simple scales to measure and compare.  Beginning to use simple measuring equipment to make approximate measurements.</p> <p><b>Researching</b></p> <p>Gathering specific information from one simplified, specified source.</p> <p><b>Recording (tables)</b></p> <p>Using a prepared table to record results, including numbers.</p> <p><b>Analysing and drawing conclusions</b></p> <p>Using their results to answer simple questions.</p>																				
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<b>Year 1/2 Summer 1 Cycle A</b>	<p><b>Focus: Plants – Plant Growth</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working Scientifically</b>  asking simple questions and recognising that they can be answered in different ways.  observing closely, using simple equipment.  performing simple tests.  using their observations and ideas to suggest answers to questions.  gathering and recording data to help in answering questions.</p> <p><b>Scientific Knowledge and Understanding</b>  observe and describe how seeds and bulbs grow into mature plants.  find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p><b>Prior Learning: Plants – Introduction to plants</b></p>	<p><b>Posing questions</b>  Exploring the world around them and raising their own simple questions.  Recognising there are different types of enquiry (ways to answer a question).  Responding to suggestions on how to answer questions.</p> <p><b>Planning</b>  Beginning to recognise whether a planned test is fair.  With support, deciding if suggested observations are suitable.</p> <p><b>Predicting</b>  Suggesting what might happen, often justifying it with personal experience.</p> <p><b>Observing</b>  Using their senses to describe, in simple terms, what they notice or what has changed.</p> <p><b>Measuring (quantitative data)</b>  Beginning to use standard units and read simple scales to measure and compare.  Beginning to use simple measuring equipment to make approximate measurements.</p> <p><b>Recording (diagrams)</b>  Drawing and labelling simple diagrams.</p> <p><b>Recording (tables)</b>  Using a prepared table to record results including: numbers; simple observations.</p> <p><b>Analysing and drawing conclusions</b>  Using their results to answer simple questions.  Beginning to recognise when results or observations do not match their predictions.</p>																					
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<b>Year 1/2 Summer 2 Cycle A</b>	<p><b>Focus: Making Connections – Ocean Predators</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working Scientifically</b>  asking simple questions and recognising that they can be answered in different ways.  observing closely, using simple equipment.  performing simple tests.  identifying and classifying.  using their observations and ideas to suggest answers to questions.  gathering and recording data to help in answering questions.</p> <p><b>Scientific Knowledge and Understanding</b>  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.  observe changes across the four seasons.  observe and describe weather associated with the seasons and how day length varies.  identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.  identify and name a variety of plants and animals in their habitats, including microhabitats.  describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.  find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.  notice that animals, including humans, have offspring which grow into adults.  find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</p> <p><b>Prior Learning:</b> All previous units taught this year</p>	<p><b>Posing questions</b>  Exploring the world around them and raising their own simple questions.  Recognising there are different types of enquiry (ways to answer a question).</p> <p><b>Planning</b>  Beginning to recognise whether a planned test is fair.  Ordering a simple method.</p> <p><b>Predicting</b>  Suggesting what might happen, often justifying with personal experience.</p> <p><b>Observing (qualitative data)</b>  Using their senses to describe, in simple terms, what they notice or what has changed.</p> <p><b>Recording (tables)</b>  Using a prepared table to record results, including simple observations and tally frequency.</p> <p><b>Graphing</b>  Representing data using pictograms.</p> <p><b>Analysing and drawing conclusions</b>  Using their results to answer simple questions.  Beginning to recognise when results or observations do not match their predictions.</p>																		
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<b>Year 3 and 4 Autumn 1 Cycle A</b>	<p><b>Focus: Energy: Light and Shadows</b></p> <p><b>National Curriculum</b></p> <p><b>Working scientifically</b>  asking relevant questions and using different types of scientific enquiries to answer them.  setting up simple practical enquiries, comparative and fair tests.  making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.  gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.  recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.  using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.  identifying differences, similarities or changes related to simple scientific ideas and processes.  using straightforward scientific evidence to answer questions or to support their findings.</p> <p><b>Scientific knowledge and understanding</b>  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 an opaque object.  find patterns in the way that the size of shadows change.</p> <p><b>Prior Learning: None</b></p>	<p><b>Posing questions</b>  Beginning to raise further questions during the enquiry process.  Considering what makes a testable question.  Beginning to recognise that there are different types of enquiry and that they are suitable for different questions.  Beginning to make suggestions about how different questions could be answered.</p> <p><b>Planning</b>  Beginning to select from options which variables will be changed, measured and controlled.</p> <p><b>Predicting</b>  Making predictions about what they think will happen by using scientific knowledge and personal experience to explain their prediction.</p> <p><b>Observing</b>  Using their senses to describe, in more detail and with simple scientific vocabulary, what they notice or what has changed.</p> <p><b>Measuring</b>  Using standard units to measure and compare.  Using measuring equipment with increasing accuracy.  Reading scales with unmarked intervals between numbers.</p> <p><b>Recording</b>  Using a prepared table to record results including more detailed observations.  Using tables with more than two columns.  Identifying and adding headings to tables.  Beginning to design simple results tables.</p> <p><b>Grouping and classifying</b>  Grouping based on visible characteristics and measurable properties.</p> <p><b>Graphing</b>  Reading the value of bars with greater accuracy.</p> <p><b>Analysing and drawing conclusions</b>  Writing a conclusion to summarise findings using simple scientific vocabulary.  Beginning to suggest how one variable may have affected another.  Beginning to quote results as evidence of relationships.  Identifying data that does not fit a pattern (anomalous data).  Recognising when results or observations do not match their predictions.  Beginning to use identified patterns to predict new values or trends.</p>													
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<b>3: Where do shadows come from?</b> To recognise which materials cast a shadow	<b>Opaque materials create the darkest shadows, translucent materials create a lighter shadow and transparent materials allow the most light to pass through.</b>	<b>Light source</b> – any object that produces light. <b>Variable</b> – any factor that can be controlled, changed or measured in experiments.													
<b>4: Shadows throughout the day</b> To summarise how shadows change throughout the day	<b>Shadows change in length during the day depending on the position of the sun.</b>	<b>Change variable</b> – a variable that can be changed to determine how the change affects another variable. <b>Control variable</b> – a variable that remains constant to ensure accurate results in an experiment. <b>Measured variable</b> – is a variable that can be measured.													
<b>5: Investigating shadows</b> To investigate how the distance of the light source affects the size of its shadow	<b>The brightness of the light source, the object's shape and the light sources position all affect how a shadow appears.</b>	<b>Conclusion</b> – Final judgement resulting from analysing an experiment. <b>Pattern</b> – repeating or predictable arrangement of information.													
<b>6. Using light and shadows</b> To tell a story using shadow puppets	<b>Opaque materials create the darkest shadows, translucent materials create a lighter shadow and transparent materials allow the most light to pass through.</b>	<b>Shadow puppet</b> - a flat figure or cutout, sometimes incorporating translucent colour, that is manipulated between a light source and a translucent screen to create a silhouette.													

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<b>Year 3 and 4</b> <b>Autumn 2</b> <b>Cycle A</b>	<p><b>Focus: Animals including humans – Movement and Nutrition</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working scientifically</b>            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.            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><b>Scientific knowledge and understanding</b>            identify that animals, including humans, need the right types and amount 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> <p><b>Prior Learning: Animals including humans – Life cycles and health</b></p>	<p><b>Measuring</b></p> <p>Using standard units to measure and compare.            Using measuring equipment with increasing accuracy.            Reading scales with unmarked intervals between numbers.</p> <p><b>Researching</b></p> <p>Gathering specific information from a variety of sources.</p> <p><b>Recording</b></p> <p>Using a prepared table to record results including more detailed observations.</p> <p><b>Grouping and classifying</b></p> <p>Grouping based on visible characteristics and measurable properties.</p> <p><b>Analysing</b></p> <p>Writing a conclusion to summarise findings using simple scientific vocabulary.</p> <p><b>Evaluating</b></p> <p>Beginning to identify new questions that would further the enquiry</p>																							
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<b>Year 3 and 4 Spring 1 Cycle A</b>	<p><b>Focus: Materials – Rocks and Soil</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working scientifically</b>  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.  using straightforward scientific evidence to answer questions or to support their findings.</p> <p><b>Scientific knowledge and understanding</b>  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> <p><b>Prior Learning: Materials – Uses of everyday materials</b></p>	<p><b>Observing</b>  Using their senses to describe, in more detail and with simple scientific vocabulary, what they notice or what has changed.</p> <p><b>Researching</b>  Gathering specific information from a source.</p> <p><b>Recording</b>  Beginning to draw more scientific diagrams by:  Drawing in 2D to produce simple line diagrams.  Labelling with more scientific vocabulary.</p> <p><b>Grouping and classifying</b>  Grouping based on visible characteristics and measurable properties.</p> <p><b>Graphing</b>  Representing data using bar charts.</p>																							
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	<b>5: Soil formation</b> To compare soils and how they were formed	<b>Soil can be sandy, made from sand. Clay, made from clay. Peaty, made from organic matter. Loam, a balance of sand, clay and organic matter.</b>  <b>They have different drainage rates</b>	<b>bar chart</b> – a graph to show data using different length bars <b>soil</b> – the top layer of the earth’s surface in which plants grow.																						
<b>6. Soil layers and earthworms</b> To describe a soil sample using sedimentation	<b>Earthworms benefit the soil in lots of ways: letting air and water in, drag organic matter into the soil, add castings to the soil.</b>	<b>sedimentation</b> – the process by which solid grains settle to the bottom of a liquid, forming a layer of sediment <b>earthworm</b> – a worm that lives in the soil.																							
<u>Assessment Tasks</u>	<u>Assessing Sticky Knowledge</u>	<p><b>Analysing and drawing conclusions</b>  Beginning to suggest how one variable may have affected another.  Beginning to quote results as evidence of relationships.  Beginning to use identified patterns to predict new values or trends</p> <p><u>Assessing Key Vocabulary</u>  Children use Key Vocabulary when working</p>																							

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<b>Year 3 and 4 Spring 2 Cycle A</b>	<p><b>Focus: Animals including humans – Digestion and Food</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working scientifically</b>  asking relevant questions and using different types of scientific enquiries to answer them.  setting up simple practical enquiries, comparative and fair tests.  making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.  gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.  recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.  using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.  identifying differences, similarities or changes related to simple scientific ideas and processes.  using straightforward scientific evidence to answer questions or to support their findings.</p> <p><b>Scientific knowledge and understanding</b>  recognise that living things can be grouped in a variety of ways.  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 and interpret a variety of food chains, identifying producers, predators and prey.</p> <p><b>Prior Learning: Animals – Movement and nutrition</b></p>	<p><b>Planning</b>  Beginning to select from options which variables will be changed, measured and controlled.</p> <p><b>Recording</b>  Beginning to design simple results tables.</p> <p><b>Grouping and classifying</b>  Grouping based on visible characteristics and measurable properties.</p> <p><b>Analysing and drawing conclusions</b>  Beginning to suggest how one variable may have affected another.  Beginning to use identified patterns to predict new values or trends.</p> <p><b>Evaluating</b>  Beginning to identify steps in the method that need changing and suggest improvements.  Beginning to identify which variables were difficult to control and suggesting how to better control them.  Commenting on the degree of trust by reflecting on the quality of results (repeating results, accurate measurements and maintaining control variables).</p>																								
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<b>Year 3 and 4</b> <b>Summer 1</b> <b>Cycle A</b>	<p><b>Focus: Energy – Electricity and Circuits</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working scientifically</b>  asking relevant questions and using different types of scientific enquiries to answer them.  setting up simple practical enquiries, comparative and fair tests.  making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.  gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.  recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.  using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.  identifying differences, similarities or changes related to simple scientific ideas and processes.  using straightforward scientific evidence to answer questions or to support their findings.</p> <p><b>Scientific knowledge and understanding</b>  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 insulators, and associate metals with being good conductors.</p> <p><b>Prior Learning:</b></p>	<p><b>Posing questions</b>  Considering what makes a testable question.  Beginning to recognise that there are different types of enquiry and that they are suitable for different questions.  Beginning to make suggestions about how different questions could be answered.</p> <p><b>Planning</b>  Planning a simple method, verbally and in writing.  Beginning to write a simple method in numbered steps.  Selecting and beginning to decide what simple equipment might be used to aid observations and measurements.</p> <p><b>Predicting</b>  Making predictions about what they think will happen by predicting a trend by considering how the changing variable will affect the measured variable.</p> <p><b>Observing</b>  Using their senses to describe, in more detail and with simple scientific vocabulary, what they notice or what has changed.</p> <p><b>Recording</b>  Beginning to draw scientific diagrams that are in 2D and simple line diagrams.  Using a prepared table to record results including more detailed observations.  Using tables with more than two columns.  Identifying and adding headings to tables.  Beginning to design simple results tables.</p> <p><b>Grouping and classifying</b>  Grouping based on visible characteristics and measurable properties.</p> <p><b>Analysing and drawing conclusions</b>  Writing a conclusion to summarise findings using simple scientific vocabulary.  Beginning to suggest how one variable may have affected another.  Beginning to use identified patterns to predict new values or trends.</p>																							
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<b>Year 3 and 4 Summer 2 Cycle A</b>	<p><b>Focus: Making Connections – How does food affect muscle fatigue?</b></p> <p><b><u>National Curriculum Knowledge</u></b></p> <p><b>Working scientifically</b>  asking relevant questions and using different types of scientific enquiries to answer them.  setting up simple practical enquiries, comparative and fair tests.  making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.  gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.  recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.  using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.  identifying differences, similarities or changes related to simple scientific ideas and processes.  using straightforward scientific evidence to answer questions or to support their findings.</p> <p><b>Scientific knowledge and understanding</b>  identify that animals, including humans, need the right types and amount 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.  recognise that soils are made from rocks and organic matter.  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 an opaque object.  describe the simple functions of the basic parts of the digestive system in humans.  construct and interpret a variety of food chains, identifying producers, predators and prey.  construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.  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> <p><b>Prior Learning:</b> All previous units taught this year</p> <table border="1" data-bbox="290 1228 2131 1938"> <thead> <tr> <th data-bbox="290 1228 839 1262">Lesson</th> <th data-bbox="839 1228 1406 1262">Sticky Knowledge</th> <th data-bbox="1406 1228 2131 1262">Key Vocabulary</th> </tr> </thead> <tbody> <tr> <td data-bbox="290 1262 839 1367"> <b>1: Investigating muscle fatigue - 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<p style="text-align: center;">Year 5/6 Autumn 1 Cycle A</p>	<p><b>Focus: Mixtures and Separation</b></p> <p><b>Working Scientifically</b></p> <p>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.            reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p><b>Scientific Knowledge and Understanding</b></p> <p>know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.            use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.            demonstrate that dissolving, mixing and changes of state are reversible changes.</p> <p><b>Prior Learning:</b> Materials (States of matter, Y3/4)</p>	<p><b>Researching</b> Gathering answers to open-ended questions from a variety of sources.</p> <p><b>Recording (diagrams)</b> Labelling with a broader range of scientific vocabulary. Annotating diagrams to explain concepts and convey opinions.</p> <p><b>Posing questions</b> Selecting the most appropriate enquiry method to answer questions and give justification.</p> <p><b>Observing (qualitative data)</b> Using their senses to describe, in detail and with a broader range of scientific vocabulary, what they notice or what has changed.</p> <p><b>Planning</b> Suggesting which variables will be changed, measured and controlled. Making and explaining decisions about what observations to make and how long to make them for -</p>	
	<p>Lesson</p> <p><b>1: Mixtures</b> <b>Knowledge</b> - To describe mixtures. <b>Working scientifically</b> - To research using a range of secondary resources.</p>	<p>Sticky Knowledge</p> <p><b>A mixture is when two or more substances are mixed together and remain present. Examples are soil, gunpowder, seawater and sand.</b></p>	<p>Key Vocabulary</p> <p><b>mixture</b> - When two or more substances are mixed together and remain present. <b>particle</b> - The tiny building blocks that make up everything around us.</p>
	<p><b>2: Sieving</b> <b>Knowledge</b> - To explain the process of sieving. <b>Working scientifically</b> - To draw and annotate a diagram to explain a concept.</p>	<p><b>Sieving is passing a mixture through a sieve to separate different-sized pieces; this separates mixtures using increasingly small holes to separate the pieces from biggest to smallest.</b></p>	<p><b>sieve</b> - A piece of equipment with holes used for separating. <b>sieving</b> - A technique used to separate a mixture with different sized solids.</p>
	<p><b>3: Filtering</b> <b>Knowledge</b> - To explain the process of filtering. <b>Working scientifically</b> - To identify testable questions and how to answer them.</p>	<p><b>Filtering is a technique in which a liquid-solid mixture is separated by passing it through a material with gaps; this separates mixtures by trapping larger solid particles and letting the smaller liquid particles pass through.</b></p>	<p><b>filtering</b> - A technique used to separate liquid-solid mixtures.</p>
	<p><b>4: Solutions</b> <b>Knowledge</b> - To describe solutions and how they can be identified. <b>Working scientifically</b> - To make observations about solutions.</p>	<p><b>Dissolving as when a substance breaks apart and spreads out in a liquid.</b> <b>A solution as a mixture of a liquid and a dissolved substance (eg, tea, fizzy drinks)</b> <b>Solutions are clear with no visible particles.</b></p>	<p><b>dissolve</b> - When a substance spreads evenly throughout a liquid. <b>insoluble</b> - A substance that will not dissolve. <b>soluble</b> - A substance that will dissolve. <b>solution</b> - A mixture made up of one or more substances dissolved in a liquid.</p>
	<p><b>5: Dissolving</b> <b>Knowledge</b> - To identify which factors affect the time taken to dissolve. <b>Working scientifically</b> - To plan a fair test with consideration of variables and measurements.</p>	<p><b>Some factors that affect dissolving include temperature, stirring, size of substance, type of substance and type of liquid.</b></p>	<p><b>control variable</b> - A variable that needs to be kept the same. <b>variable</b> - Something that can change and cause an effect.</p>
	<p><b>6. Evaporating</b> <b>Knowledge</b> - To describe the process of evaporation.</p>	<p><b>Evaporating is when a liquid turns to a gas and should be used to separate solutions.</b></p>	<p><b>crystallising</b> - A dissolved solid reforming. <b>evaporation</b> - When a liquid changes into a gas. <b>evaporation method</b> - A technique used to separate a dissolved substance from a solution.</p>
	<p><u>Assessment Tasks</u></p>	<p><u>Assessing Sticky Knowledge</u> <u>End of Unit Quiz</u></p>	<p><u>Assessing Key Vocabulary</u> Children use Key Vocabulary when working</p>

Year	Knowledge	Skills	
<p style="text-align: center;">Year 5/6 Autumn 2 Cycle A</p>	<p><b>Focus: Materials – Properties and Changes</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working Scientifically</b>  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.  reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p><b>Scientific Knowledge and Understanding</b>  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.  give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.  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> <p><b>Prior Learning: Mixtures and Separation</b></p>	<p><b>Planning</b>  Writing a method including detail about how to ensure control variables are kept the same.</p> <p><b>Predicting</b>  Making increasingly scientific predictions by:  using previous scientific knowledge and evidence to inform their predictions;  using scientific language to describe a potential outcome or explain why they think something will happen;  making links between topics to evidence a prediction.</p> <p><b>Measuring (quantitative data)</b>  Using standard units to measure and compare with increasing precision (decimals).</p> <p><b>Recording (tables)</b>  Suggesting headings to tables, including units.  Designing results tables with increasing independence with consideration of variables where applicable.</p> <p><b>Analysing and drawing conclusions</b>  Writing a conclusion to summarise findings using increasingly complex scientific vocabulary.</p> <p><b>Evaluating</b>  Identifying which variables were difficult to control and suggesting how to better control them.  Commenting on the degree of trust by also reflecting on: accuracy (human error with equipment); reliability (repeating results).</p>	
	Lesson	Sticky Knowledge	Key Vocabulary
	<b>1: Hardness</b> <b>Knowledge</b> – To determine the hardness of materials and link this to their uses <b>Working scientifically</b> – to evaluate the hardness test to determine the degree of trust in the results	<b>Materials have different levels of “hardness”</b> <b>A test should produce trustworthy, reproducible results</b>	<b>control variable</b> – A variable that needs to be kept the same  <b>variable</b> – Something that can change and cause an effect
	<b>2: Transparency</b> <b>Knowledge</b> – To determine the transparency of different materials and link to their use <b>Working scientifically</b> – To plan and draw a table of results	<b>Opaque materials allow no light to pass through</b> <b>Translucent materials allow some light to pass through, which is scattered</b> <b>Transparent materials allows light to easily pass through it.</b>	<b>light meter</b> - A piece of equipment used for measuring light intensity  <b>lux</b> – A unit used to measure light intensity
	<b>3: Conductivity</b> <b>Knowledge</b> – To determine the conductivity of different materials and link this to their uses <b>Working scientifically</b> – To write a detailed organised method that is easy to follow	<b>Thermal conductivity is a measure of how quickly and easily heat passes through a material</b>  <b>Heat travels along objects by making the adjacent molecules vibrate</b>	<b>insulator</b> – A material that does not let heat and electrical charge pass though quickly and easily  <b>conductor</b> – A material that lets heat and electrical charge pass though quickly and easily
	<b>4: Reversible changes</b> <b>Knowledge</b> – To demonstrate reversible changes <b>Working scientifically</b> - To write a prediction using prior knowledge of the states of matter	<b>A reversible change is a change to a material that can be easily undone, allowing it to return to its original form.</b>	<b>change of state</b> – When materials change from one state of matter to another, often due to a change in temperature – <b>states of matter</b> – The forms matter can take; solid,, liquid, gas <b>freezing, melting, evaporating, condensing</b> – processes whereby materials can change their state of matter
	<b>5: Irreversible changes – burning and rusting</b> <b>Knowledge</b> - To demonstrate irreversible changes <b>Working scientifically</b> – To analyse observations about rusting and use them to support a conclusion	<b>An irreversible change is when a material undergoes a change that cannot be easily undone and which produces a new material</b>	<b>burning</b> – An irreversible change in which a material burns to make a new product <b>rusting</b> – An irreversible change that happens when iron is exposed to water and air
	<b>6. Irreversible changes - mixing</b> <b>Knowledge</b> – To demonstrate irreversible changes <b>Working scientifically</b> – To measure the circumference of a balloon accurately	<b>Many food processes result in irreversible changes.</b>	<b>circumference</b> – The distance around the boundary of a circle

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<p style="text-align: center;">Year 5/6 Spring 1 Cycle A</p>	<p><b>Focus: Forces and Space – Earth and Space</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working Scientifically</b> identifying scientific evidence that has been used to support or refute ideas or arguments.</p> <p><b>Scientific Knowledge and Understanding</b> 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. explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p><b>Prior Learning: Y3/4 Forces and Space: Forces and Magnets (Cycle A)</b></p>	<p>Posing questions</p> <p>Raising questions throughout the enquiry process. Identifying testable questions. Selecting the most appropriate enquiry method to answer questions and give justification.</p> <p>Recording</p> <p>Drawing scientific diagrams by: using a wider range of standard symbols; drawing with increasing accuracy; labelling with a broader range of scientific vocabulary; annotating diagrams to explain concepts and convey opinions. Suggesting headings to tables, including units. Designing results tables with increasing independence with consideration of variables where applicable.</p> <p>Analysing and drawing conclusions</p> <p>Using identified patterns to predict new values or trends</p>																				
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<p><b>6. Satellites and Space Junk</b> <b>Science in Action</b> – To describe some uses of satellites and the problems posed by space junk <b>Working scientifically</b> – To use temperature data to make predictions about climate change</p>	<p><b>There are many human made objects orbiting earth. When these objects stop working, they continue to orbit the earth.</b></p>	<p><b>space junk</b> – Things left in space that are no longer in use</p> <p><b>satellites</b> – Objects that orbit the Earth. They can be natural or artificial.</p>																				

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<b>Year 5/6 Spring 2 Cycle A</b>	<b>Focus: Animals including humans – Circulation and health</b>			<p><b>Planning</b> Suggesting which variables will be changed and controlled. Making and explaining decisions about what observations to make Writing a method, including details about how to ensure control variables are kept the same. Writing a method that considers reliability by planning readings. Suggesting the most appropriate equipment to make observations and measurements and justifying their choices.</p> <p><b>Predicting</b> Making increasingly scientific predictions by using previous scientific knowledge and evidence to inform their predictions, using scientific language to describe a potential outcome or explain why they think something will happen and making links between topics</p> <p><b>Observing</b> Using their senses to describe, in detail and with a broader range of scientific vocabulary, what they notice or what has changed.</p> <p><b>Measuring</b> Using standard units to measure and compare with increasing precision (decimals). Reading a wider variety of scales with unmarked intervals</p> <p><b>Researching</b> Gathering answers to questions from a variety of sources.</p> <p><b>Recording (tables)</b> Using tables with columns that allow for repeat readings. Suggesting headings to tables, including units. Designing results tables with increasing independence with consideration of variables where applicable. Calculating the mean average.</p> <p><b>Graphing</b> Representing data by using line graphs and scatter graphs. Plotting points with greater accuracy. Reading the value of plotted points with greater accuracy.</p> <p><b>Analysing and drawing conclusions</b> Recognise the following across a broader range of contexts and in more complexity: naturally occurring patterns and relationships, changes over time and relevant secondary data. Writing a conclusion to summarise findings using increasingly complex scientific vocabulary. Suggesting with increasing independence how one variable may have affected another. Quoting relevant data as evidence of relationships. Identifying anomalies in repeat data Comparing individual, class and/or model data to the prediction and recognising when they do not match. Using identified patterns to predict new values or trends.</p> <p><b>Evaluating</b> Commenting on the degree of trust by also reflecting on the reliability (repeating results) and sources of information (e.g. websites, books).</p>
	<b>National Curriculum Knowledge</b>			
	<b>Working Scientifically</b>			
	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 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.				
<b>Scientific Knowledge and Understanding</b>				
identify and 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 and lifestyle on the way their bodies function.				
describe the ways in which nutrients and water are transported within animals, including humans.				
<b>Prior learning: Animals including humans – digestion and food</b>				
<b>Lesson</b>	<b>Sticky Knowledge</b>	<b>Key Vocabulary</b>		
<b>1: Factors affecting health</b> <b>Knowledge</b> – To identify factors that affect our health and how to reduce their negative impact <b>Working scientifically</b> – To evaluate sources of information	<b>Health is mental, physical and social wellbeing.</b>  <b>A lifestyle is a persons choices about what they eat, how much they sleep and exercise, and other choices.</b>	<b>balanced diet</b> – A diet that includes all seven nutrients in the right amounts  <b>evaluate</b> – To judge and form an opinion on something using positives and negatives		
<b>2: The heart and circulatory system</b> <b>Knowledge</b> – To summarise the key structures and purpose of the circulatory system	<b>The heart pushes blood around the circulatory system</b> <b>Blood vessels carry the blood around the body</b> <b>Blood carries oxygen and carbon dioxide around our bodies</b>	<b>circulatory system</b> – The group of organs responsible for transporting blood around the body  <b>pump</b> – to force gases and liquids to move		
<b>3: Blood</b> <b>Knowledge</b> – To identify the key roles of blood <b>Working scientifically</b> – To evaluate a model	<b>Blood is made from plasma, red blood cells, white blood cells and platelets</b>	<b>bloodstream</b> – the flow of blood around a body  <b>transport</b> – to move something from one place to another		
<b>4: Heart rate</b> <b>Knowledge</b> – To investigate the relationship between animal size and heart rate <b>Working scientifically</b> – To interpret patterns in data	<b>The larger the animal, the larger the heart</b>	<b>anomaly</b> – A result that does not fit the pattern <b>reliable</b> – results that show the same pattern when repeated <b>evidence</b> – information that can be used to show if something is true or not		
<b>5: Investigating exercise and heart rate</b> <b>Knowledge</b> - To investigate the relationship between exercise and heart rate <b>Working scientifically</b> – To write a method	<b>To count heartbeats, we measure our pulse</b> <b>A resting heartrate is a pulse count taken when someone is at rest.</b>	<b>mean average</b> – The sum of all the values divided by the number of values <b>variable</b> – Something that can change and cause an effect		
<b>6. Heart rate and fitness</b> <b>Knowledge</b> – To describe the relationship between heart rate and fitness <b>Working scientifically</b> – To draw a line graph	<b>People who do regular exercise generally have a lower resting heart rate</b> <b>People who do regular exercise; their heart rate generally gets back to their resting rate more quickly.</b>	<b>resting heart rate</b> – The number of times the heart beats per minute when relaxed, sitting or lying down <b>fitness</b> – The condition of being physically strong and healthy		

Year	Knowledge	Skills																							
<p style="text-align: center;">Year 5/6 Summer 1 Cycle A</p>	<p><b>Energy- Light and Reflection</b></p> <p><b>National Curriculum Knowledge</b></p> <p><b>Working Scientifically</b>            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 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.</p> <p><b>Scientific Knowledge and Understanding</b>            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 light sources to our eyes or from light sources to objects and then to our eyes.            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>Prior Learning: Y3/4 Energy – Light and Shadows</p>	<p><b>Posing questions</b>            Identifying testable questions.            Selecting the most appropriate enquiry method to answer questions and give justification.</p> <p><b>Planning</b>            Suggesting which variables will be changed, measured and controlled.            Writing a method including details about how to ensure control variables are kept the same.</p> <p><b>Observing</b>            Using their senses to describe, in detail and with a broader range of scientific vocabulary, what they notice or what has changed.</p> <p><b>Measuring</b>            Using standard units to measure and compare with increasing precision (decimals).            Reading a wider variety of scales with unmarked intervals between numbers.</p> <p><b>Recording</b>            Drawing scientific diagrams with increasing accuracy, labelling with a broader range of scientific vocabulary and annotating diagrams to explain concepts and convey opinions.            Using tables with columns that allow for repeat readings.            Calculating the mean average.</p> <p><b>Graphing</b>            Representing data by using line graphs and scatter graphs.            Plotting points with greater accuracy.            Reading the value of plotted points with greater accuracy.</p> <p><b>Analysing and drawing conclusions</b>            Writing a conclusion to summarise findings using increasingly complex scientific vocabulary.            Suggesting with increasing independence how one variable may have affected another.            Identifying anomalies in repeat data and excluding results where appropriate.            Using identified patterns to predict new values or trends.</p> <p><b>Evaluating</b>            Identifying steps in the method that need changing and suggesting improvements.            Identifying which variables were difficult to control and suggesting how to control them better.            Commenting on the degree of trust by reflecting on accuracy (human error with equipment) and reliability (repeating results).</p>																							
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Year 5/6 Summer 2 Cycle A	<b>Focus: Making connections – How reflective are space blankets?</b>	This unit revisits the working scientifically skills covered in mixed-age Y5/6 (A), including:																		
	<b><u>National Curriculum Knowledge</u></b>	Posing questions.																		
	<b>Working Scientifically</b>	Planning.																		
	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.	Predicting.																		
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	identifying scientific evidence that has been used to support or refute ideas or arguments.	Measuring.																		
	<b>Scientific Knowledge and Understanding</b>	Recording.																		
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.	Graphing.																			
use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.	Analysing and drawing conclusions.																			
give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.	Evaluating.																			
describe the movement of the Earth, and other planets, relative to the Sun in the solar system.																				
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describe the Sun, Earth and Moon as approximately spherical bodies.																				
explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.																				
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