



# Learning objectives and skills

Advent		Lent		Pentecost	
Our Changing World The Earth and Beyond Get Sorted	Get Sorted Everyday Materials	Everyday Materials Circle of Life	Reproduction in Plants and Animals Our Changing World Marvellous Mixtures	Our Changing World Marvellous Mixtures Materials: All Change!	Materials: All Change! Our Changing World Feel The Force
<p><b>Our Changing World</b> 1: What signs of plant reproduction can we observe around our school?</p> <ul style="list-style-type: none"> <li>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> </ul> <p><b>The Earth and Beyond</b> 1: What's in space?</p> <ul style="list-style-type: none"> <li>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> </ul> <p>2: What is a year?</p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p>3: What is a day?</p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p>4: How does the Sun help us to measure time?</p> <ul style="list-style-type: none"> <li>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when necessary.</li> </ul> <p>5: What time is it around the world?</p> <ul style="list-style-type: none"> <li>Recording data and results of increasing complexity</li> </ul>	<p>4: Is a liquid always runny?</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p>5: Is a liquid always runny? (part two)</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p>6: Are all metals the same?</p> <ul style="list-style-type: none"> <li>Identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul> <p>7: Are all metals the same? (part two)</p> <ul style="list-style-type: none"> <li>Identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul> <p>8: Are all plastics the same?</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p>9: Are all plastics the same? (part two)</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p>10: To bounce or not to bounce: Why are sports balls so different?</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including</li> </ul>	<p>5: Mystery material: What will happen if we add water to the material?</p> <ul style="list-style-type: none"> <li>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when necessary.</li> </ul> <p>6: Are all bikes the same?</p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p>7: Spencer Silver and sticky notes: What's the stickiest glue?</p> <ul style="list-style-type: none"> <li>Using test results to make predications to set up further comparative and fair tests.</li> </ul> <p>8: Spencer Silver and sticky notes: What's the stickiest glue? (part two)</p> <ul style="list-style-type: none"> <li>Using test results to make predications to set up further comparative and fair tests.</li> </ul> <p><b>Circle of Life</b> 1: What is a life cycle?</p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p>2: What do we know about the life cycles of mammals?</p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from</li> </ul>	<p><b>Reproduction in Plants and Animals</b> 1: How do flowering plants reproduce?</p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p>2: Are all flowers on all plants the same?</p> <ul style="list-style-type: none"> <li>Identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul> <p>3: Do all plants reproduce by producing seeds?</p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>Our Changing World</b> 2: How can we grow more plants, without using seeds?</p> <ul style="list-style-type: none"> <li>Identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul> <p><b>Reproduction in Plants and Animals</b> 4: How do amphibians and insects reproduce?</p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul>	<p><b>Our Changing World</b> 3: Which plants are best to plant in our growing space? How can we ensure that produce is ready at the right time?</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p><b>Marvelous Mixtures</b> 6: How can we get drinkable water from seawater?</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p>7: How can we get drinkable water from seawater? (part two)</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p>8: How can we purify materials?</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p>9: How can we purify materials? (part two)</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p>10: What will happen if we add a sprinkle of salt to a combination of liquids?</p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and</li> </ul>	<p>7: How long does it take for things to rust?</p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>Our Changing World</b> 4: How can we ensure that plants in our growing space yield as many crops as possible?</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p><b>Feel The Force</b> 1: How can we measure forces?</p> <ul style="list-style-type: none"> <li>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when necessary.</li> </ul> <p>2: Why does an object fall?</p> <ul style="list-style-type: none"> <li>Identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul> <p>3: What makes things move?</p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p>4: How can we slow down falling objects?</p> <ul style="list-style-type: none"> <li>Using test results to make predications to set up further comparative and fair tests.</li> </ul> <p>5: Does the shape of an object affect its movement in a liquid?</p> <ul style="list-style-type: none"> <li>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when necessary.</li> </ul> <p>6: Do all heavy things sink?</p>

<p>using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p> <p><b>6: Why do we have seasons?</b></p> <ul style="list-style-type: none"> <li>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> </ul> <p><b>7: What are our conclusions about sunrise and sunset times?</b></p> <ul style="list-style-type: none"> <li>Identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul> <p><b>8: Why does the Moon change shape?</b></p> <ul style="list-style-type: none"> <li>Using test results to make predications to set up further comparative and fair tests.</li> </ul> <p><b>Get Sorted</b></p> <p><b>1: How can we compare and group materials?</b></p> <ul style="list-style-type: none"> <li>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> </ul> <p><b>2: Is a solid always hard?</b></p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>3: Is a solid always hard? (part two)</b></p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul>	<p>recognising and controlling variables where necessary.</p> <p><b>11: To bounce or not to bounce: Why are sports balls so different?</b></p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p><b>Everyday Materials</b></p> <p><b>1: Which materials are used in our school buildings, what for and why?</b></p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>2: Weighty problem: Which is the best carrier bag?</b></p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p><b>3: Which is the best type of plate to use?</b></p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p><b>4: Cool box conundrum: Can the same container keep cold things cold and hot things hot?</b></p> <ul style="list-style-type: none"> <li>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when necessary.</li> </ul>	<p>enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p><b>3: What do we know about the life cycles of amphibians?</b></p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>4: What do we know about the life cycles of insects?</b></p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>5: What do we know about the life cycles of birds?</b></p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>6: What makes a successful life cycle?</b></p> <ul style="list-style-type: none"> <li>Identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul> <p><b>7: How are humans helping endangered animals to complete their life cycles?</b></p> <ul style="list-style-type: none"> <li>Identifying scientific evidence that has been used to support or refute ideas or arguments</li> </ul>	<p><b>5: How do mammals and birds reproduce?</b></p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>6: How does the human life cycle compare with that of other mammals?</b></p> <ul style="list-style-type: none"> <li>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</li> </ul> <p><b>Marvelous Mixtures</b></p> <p><b>1: How can we separate mixtures?</b></p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p><b>2: What happens when we mix liquids and solids?</b></p> <ul style="list-style-type: none"> <li>Using test results to make predications to set up further comparative and fair tests.</li> </ul> <p><b>3: What happens when we mix liquids and solids? (part two)</b></p> <ul style="list-style-type: none"> <li>Using test results to make predications to set up further comparative and fair tests.</li> </ul> <p><b>4: What makes a difference to how fast sugar or salt dissolves?</b></p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p><b>5: What makes a difference to how fast sugar or salt dissolves? (part two)</b></p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul>	<p>written forms such as displays and other presentations.</p> <p><b>Materials: All Change!</b></p> <p><b>1: Are the changes that happen around us reversible or non-reversible?</b></p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>2: How much gas can be produced by non-reversible change?</b></p> <ul style="list-style-type: none"> <li>Using test results to make predications to set up further comparative and fair tests.</li> </ul> <p><b>3: How long does it take for iron nails to rust?</b></p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p><b>4: What happens when a candle burns?</b></p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>5: What would make the best rocket fuel?</b></p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul> <p><b>6: What would make the best rocket fuel? (part two)</b></p> <ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul>	<ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>7: How far can you stretch?</b></p> <ul style="list-style-type: none"> <li>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> </ul> <p><b>8: How can we use levers to help us?</b></p> <ul style="list-style-type: none"> <li>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when necessary.</li> </ul> <p><b>9: How can we lift a heavy load?</b></p> <ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul> <p><b>10: Can a wheel with teeth make work easier?</b></p> <ul style="list-style-type: none"> <li>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> </ul>
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		<b>8: Why do animals make incredible journeys as part of their life cycles?</b> <ul style="list-style-type: none"> <li>Identifying scientific evidence that has been used to support or refute ideas or arguments</li> </ul>			
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### #BTK and Links with other subjects

<b>Computing</b> - Website about Space	<b>#BTK</b> - Caring for God's creation	<b>#BTK</b> - Caring for God's creation <b>Art</b> - Plants and animals	<b>Art</b> - Plants and animals	<b>#BTK</b> - Water as a precious resource <b>Geography</b> - Water	
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### Key Vocabulary

Orbit Rotate Axis Planet Solar System Star Gravity Moon	Solid Liquid Gas Viscosity Magnetic Elasticity Insulate Recycleable	Mammals Amphibians Insects Birds Grow Reproduction Aging Birth	Stigma Pollen Filament Anther Style Ovary Ovule Seed	Purify  Dissolve  Separate  Oxygen  Reaction  Reversible/irreversible  Saturated  Insoluble	Friction  Newtons  Gravity  Air Resistance  Thrust  Water Resistance  Float/sink  Forces
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	<b>Working scientifically statements.</b>
<b>Planning</b>	<ul style="list-style-type: none"> <li>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</li> </ul>
<b>Observing</b>	<ul style="list-style-type: none"> <li>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when necessary.</li> </ul>
<b>Recording</b>	<ul style="list-style-type: none"> <li>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</li> <li>Using test results to make predications to set up further comparative and fair tests.</li> </ul>
<b>Concluding</b>	<ul style="list-style-type: none"> <li>Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</li> </ul>
<b>Evaluating</b>	<ul style="list-style-type: none"> <li>Identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul>