

## Topic Overviews 2009 - 2010

Year	Topic/Project	Additional Information	Getting the best marks	Additional Resources
7	Life & Living Processes 1	<p><b>Knowledge covered</b></p> <p>This project focuses on how living organisms are organised into cells, tissues and organs. From this pupils develop their knowledge of how humans develop from conception through birth onto puberty and how humans maintain their health, through having a balanced diet and active lifestyle.</p> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning.</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> <li>• Seek assistance from their teachers whenever they are not fully confident with their knowledge.</li> </ul>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a>)</p> <p>Collins Pupil books 1&amp;2</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>The Human Body Book (612.002)</p> <p>Health and Fitness (612.044)</p> <p>Body Science (612)</p> <p>Nutrition for Life (613.2)</p> <p>Body Focus: The Digestive System (612.82)</p> <p>Body Focus: Brain (612.85)</p>

Year	Topic/Project	Additional Information	Getting the best marks	Additional Resources
				Body Focus: Eyes (612.85)  Body Focus: Ears (612.84)
7	Interdependence 1	<p><b>Knowledge covered</b></p> <p>This project focuses on the impact that humans have had on the environment and how humans classify organisms.</p> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning.</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> <li>• Seek assistance from their teachers whenever they are not fully confident with their knowledge.</li> </ul>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a>)</p> <p>Collins Pupil books 1&amp;2</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia</p> <p>See for Yourself: Energy by Nicky Foreman (333.79)</p> <p>Green Living for Dummies by Liz Barclay (333.72)</p> <p>Conservation by J Pipe (333.954)</p>

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				<p>Seven Years to Save the Planet : the Questions...and Answers by Bill McGuire (363.738)</p> <p>Global Warming for Beginners (363. 738)</p> <p>Al Gore: an Inconvenient Truth (363.738)</p>
7	<p>Particles &amp; Materials 1</p>	<p><b>Knowledge covered</b></p> <p>This project focuses on why it is important to work safely in science and how to manage hazards such as fire.</p> <p>In addition, students will learn about:</p> <ul style="list-style-type: none"> <li>• Acids and alkalis and using the pH scale,</li> <li>• Chemical and material behaviour using the particle model</li> </ul> <p>Students will use various pieces of equipment to investigate ideas</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> <li>• Seek assistance from their teachers whenever they are not fully confident with their knowledge.</li> </ul>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 1&amp;2</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Splitting the Atom by Alan Morton (539)</p>

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		<p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning.</p>		<p>The Particle Model of Matter by Roberta Baxter (539.7)</p> <p>Materials by Denise Walker (542)</p>
7	Energy 1	<p><b>Knowledge covered</b></p> <p>In this project students will study:</p> <ul style="list-style-type: none"> <li>• How energy can be transferred from one place to another.</li> <li>• The uses of fuels and why it is important to conserve them.</li> <li>• The idea of energy transfer to explain what is happening in components of simple circuits.</li> <li>• How scientific ideas can influence decisions about resources.</li> <li>• How heat travels.</li> <li>• Using scientific models in explanations</li> </ul>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> <li>• Seek assistance from their teachers whenever they are not fully confident with their knowledge.</li> </ul>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 1&amp;2</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Horrible Science: Killer Energy and Shocking Electricity (530)</p> <p>See for Yourself Energy (333.79)</p>

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		<p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning.</p>		<p>Energy Resources by Richard Spilsbury (178)</p>
7	Forces 1	<p><b>Knowledge covered</b></p> <p>The focus of this topic is the effects that forces have on objects.</p> <p>Students will study:</p> <ul style="list-style-type: none"> <li>• How the planets are arranged around the Sun and move in orbits.</li> <li>• How gravity keeps the planets in orbit and causes the effect of weight.</li> <li>• Students will learn to measure speed and explain the effects of friction, air resistance and streamlining. They will develop skills in taking measurements,</li> </ul>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> <li>• Seek assistance from their teachers whenever they are not fully confident with their knowledge.</li> </ul>	<p><b>Websites</b></p> <p><a href="http://www.bbc.co.uk/schools/ks2/bitesize/science/physical_processes">www.bbc.co.uk/schools/ks2/bitesize/science/physical_processes</a></p> <p><a href="http://www.bbc.co.uk/schools/ks3/bitesize/science/environment_earth_universe">www.bbc.co.uk/schools/ks3/bitesize/science/environment_earth_universe</a></p> <p><a href="http://www.sciencemonster.com/planets.html">http://www.sciencemonster.com/planets.html</a></p> <p><a href="http://www.bbc.co.uk/schools/ks3/bitesize/science/energy_electricity_forces">www.bbc.co.uk/schools/ks3/bitesize/science/energy_electricity_forces</a></p> <p><a href="http://www.spaceflight.nasa.gov/mars">www.spaceflight.nasa.gov/mars</a></p> <p><b>From Learning Resource Centre:</b> Space: 1000 Facts by John Farndon (520)</p>

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		<p>understanding accuracy and when to repeat readings.</p> <ul style="list-style-type: none"> <li>• How scientific ideas have affected society.</li> </ul> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning.</p>		<p>Encyclopaedia of Space by Heather Cooper and Nigel Henbest (520.3)</p> <p>Bang! The Complete History of the Universe by Brian May and Patrick Moore (523.1)</p> <p>DK Science Encyclopedia (503)</p> <p>Can you Feel the Force by Richard Hammond (530)</p> <p>The Real Scientist: Heave by Peter Riley (531.1)</p>
7	Geology	<p><b>Knowledge covered</b></p> <p>This project focuses on the main types of rocks and their properties.</p> <p>Students will learn about:</p> <ul style="list-style-type: none"> <li>• The ways that rocks are changed by physical processes.</li> </ul>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly</li> </ul>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 1&amp;3</p>

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		<ul style="list-style-type: none"> <li>The rock cycle.</li> </ul> <p>Students will develop their skills in communicating ideas in various ways</p> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning.</p>	<p>and to their best ability.</p> <ul style="list-style-type: none"> <li>Produce outstanding final Projects.</li> <li>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</li> </ul>	<p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia</p> <p>The Usbourne Encyclopedia of Planet Earth (551)</p> <p>Mapping Britains Landscapes: Coasts (551.457)</p> <p>Planet Earth: An Illustrated History (550)</p> <p>Natural Disasters (551)</p> <p>Earth: The Power of the Planet (551.1)</p> <p>Our Earth in Action: Earthquakes (551.22)</p> <p>Planet Earth by Barbara Taylor (550)</p>

Year	Topic/Project	Additional Information	Getting the best marks	Additional Resources
7	Personal & Social Education	<p><b>Knowledge covered</b></p> <p>This project focuses on how Drugs, drug use and the effects drugs have on living organisms. Pupil's knowledge of how humans develop, differ and vary from one another is then developed as is their team working and knowledge of How Science Works.</p> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> <li>• Seek assistance from their teachers whenever they are not fully confident with their knowledge.</li> </ul>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Talk to Frank – web resource about drugs and their effects.</p> <p>Collins Pupil books 3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Alcohol and Drug Abuse by Jillian Powell (362.29)</p> <p>The Real Deal: Alcohol by Rachel Lynette (362.292)</p>

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8	Life & Living Processes 2	<p><b>Knowledge covered</b></p> <p>This project focuses on how living organisms develop. Pupil's knowledge of how humans develop, differ and vary from one another is then developed as is their team working and knowledge of How Science Works.</p> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 2&amp;3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Introduction to Genes and DNA by Anna Claybourne (572.86)</p> <p>Is Genetic Research a Threat by John Meany (174.957)</p> <p>Genetic Engineering by Pete Moore (174.957)</p> <p>Health: Ethical Debates in Modern Medicine (174.2)</p>

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8	Interdependence 2	<p><b>Knowledge covered</b></p> <p>This project focuses on the impact that humans have had on the environment and the strategies needed to conserve the environment.</p> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 2&amp;3</p> <p><b>From Learning Resource Centre:</b></p> <p>Green Living for Dummies by Liz Barclay (333.72)</p> <p>Conservation by J Pipe (333.954)</p> <p>Global Warming for Beginners (363.738)</p> <p>Al Gore: an Inconvenient Truth (363.738)</p> <p>DK Science Encyclopedia (503)</p> <p>Blue Peter Planet Watch (333.72)</p>

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				<p>Protecting our Planet: Threatened Wetlands by Catherine Chambers (333.91)</p> <p>Why Science Matters: Managing Water (333.91)</p> <p>What if We do Nothing? Fossil Fuels (333.82)</p> <p>Earth SOS: Ozone Hole by Sally Morgan (363.738)</p> <p>Science at the Edge: Global Warming (363.738)</p> <p>Science at the Edge: Alternative Energy Sources (333.794)</p> <p>See for Yourself: Energy (333.954)</p> <p>Protect our Planet: Polluted Air (363.739)</p> <p>The Impact of Climate Change by Carolyn Fry (363.738)</p>

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8	Particles & Materials 2	<p><b>Knowledge covered</b></p> <p>This project focuses on Elements, compounds and mixtures through the study of how metals are affected by chemical reactions and the reactivity series.</p> <p>Students will begin to represent reactions using equations, predict outcomes and explain reactions using the particle model.</p> <p>Students will consider:</p> <ul style="list-style-type: none"> <li>• How ideas and explanations develop over time.</li> <li>• How to manage risk when conducting experiments.</li> </ul> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a>)</p> <p>Collins Pupil books 2&amp;3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Chemistry for the Utterly Confused (540)</p> <p>It's Elementary! Putting the Crackle into Chemistry by Robert Winston 9540)</p> <p>Amazing Science Discoveries: Chemistry by Bryson Gore (540)</p> <p>E-Z Chemistry (540)</p>

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8	Energy 2	<p><b>Knowledge covered</b></p> <p>This project focuses on how energy can be transferred as sound and light.</p> <p>Students will study:</p> <ul style="list-style-type: none"> <li>• The various ways in which sound can be produced and how sounds vary according to amplitude and frequency.</li> <li>• Reflection and refraction of light</li> <li>• The use of scientific models in explanations.</li> </ul> <p>Students will use their skills to gather evidence and construct explanations</p> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 2&amp;3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Horrible Science: Killer Energy and Shocking Electricity (530)</p> <p>See for Yourself Energy (333.79)</p> <p>Energy Resources by Richard Spilsbury (178)</p>

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8	Forces 2	<p><b>Knowledge covered</b></p> <p>This project focuses on Forces and the variety of effects they produce, including pressure and acceleration.</p> <p>Students will develop their understanding about the force of gravity and how this keeps the planets in orbit and causes the effect of weight.</p> <p>Students will learn:</p> <ul style="list-style-type: none"> <li>• To calculate outcomes such as pressure and moments and interpret graphs.</li> <li>• Gather data and repeat readings.</li> <li>• Describe how scientific ideas have affected society</li> </ul> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Can you Feel the Force by Richard Hammond (530)</p> <p>The Real Scientist: Heave by Peter Riley (531.1)</p>



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9	Variation	<p><b>Knowledge covered</b></p> <p>This project focuses on how living organisms develop. Students' knowledge of how humans develop, differ and vary from one another is then developed as is their team working and knowledge of How Science Works.</p> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a>)</p> <p>Collins Pupil books 3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Introduction to Genes and DNA by Anna Claybourne (572.86)</p> <p>Is Genetic Research a Threat by John Meany (174.957)</p> <p>Genetic Engineering by Pete Moore (174.957)</p> <p>Health: Ethical Debates in Modern Medicine (174.2)</p>

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9	Drugs & Behaviour	<p><b>Knowledge covered</b></p> <p>This project focuses on how Drugs, drug use and the effects drugs have on living organisms. Pupil's knowledge of how humans develop, differ and vary from one another is then developed as is their team working and knowledge of How Science Works.</p> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Alcohol and Drug Abuse by Jillian Powell (362.29)</p> <p>The Real Deal: Alcohol by Rachel Lynette (362.292)</p>

Year	Topic/Project	Additional Information	Getting the best marks	Additional Resources
9	Chemical Patterns	<p><b>Knowledge covered</b></p> <p>This project focuses on Elements, compounds and mixtures through the study of how metals are affected by chemical reactions and the reactivity series.</p> <p>Students will represent reactions using equations, predict outcomes and explain reactions using the particle model.</p> <p>Students will consider:</p> <ul style="list-style-type: none"> <li>• How ideas and explanations develop over time.</li> <li>• How to manage risk when conducting experiments.</li> </ul> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Chemistry for the Utterly Confused (540)</p> <p>It's Elementary! Putting the Crackle into Chemistry by Robert Winston 9540)</p> <p>Amazing Science Discoveries: Chemistry by Bryson Gore (540)</p> <p>E-Z Chemistry (540)</p>

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9	Chemical Reactions	<p><b>Knowledge covered</b></p> <p>In their project students will further develop their skills to describe a range of reactions using equations and predict the outcomes.</p> <p>Students will learn:</p> <ul style="list-style-type: none"> <li>• How a reaction involves the rearrangement of particles.</li> <li>• To manage risk when conducting experiments</li> </ul> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Chemistry for the Utterly Confused (540)</p> <p>It's Elementary! Putting the Crackle into Chemistry by Robert Winston 9540)</p> <p>Amazing Science Discoveries: Chemistry by Bryson Gore (540)</p> <p>E-Z Chemistry (540)</p>

Year	Topic/Project	Additional Information	Getting the best marks	Additional Resources
9	Energy transfers	<p><b>Knowledge covered</b></p> <p>This project focuses on how energy is transferred in various contexts, such as light and electrical circuits, and what the effects are.</p> <p>Students will gather evidence and use it to construct explanations.</p> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Horrible Science: Killer Energy and Shocking Electricity (530)</p> <p>See for Yourself Energy (333.79)</p> <p>Energy Resources by Richard Spilsbury (178)</p>

Year	Topic/Project	Additional Information	Getting the best marks	Additional Resources
9	Pressure, Forces & Moments	<p><b>Knowledge covered</b></p> <p>This project focuses on Forces and the variety of effects they produce including pressure and acceleration.</p> <p>Students will learn to calculate outcomes such as pressure and moments and interpret graphs.</p> <p>They will practise gathering data and repeating readings.</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Can you Feel the Force by Richard Hammond (530)</p> <p>The Real Scientist: Heave by Peter Riley (531.1)</p>

Year	Topic/Project	Additional Information	Getting the best marks	Additional Resources
9	Humans & the Environment	<p><b>Knowledge covered</b></p> <p>This project focuses on the impact that humans have had on the environment and the strategies needed to conserve the environment.</p> <p><b>Skills gained</b></p> <p>Creative thinking, team work, effective participation, independent enquiry and reflective learning</p>	<p>The students who achieve the highest marks, typically:</p> <ul style="list-style-type: none"> <li>• Produce all work to their best ability.</li> <li>• Use a wide variety of sources to help with their work and revision.</li> <li>• Complete the Independent Learning Project promptly and to their best ability.</li> <li>• Produce outstanding final Projects.</li> </ul> <p>Seek assistance from their teachers whenever they are not fully confident with their knowledge.</p>	<p>BBC Bitesize: (<a href="http://www.bbc.co.uk/schools/ks3/bitesize/science">www.bbc.co.uk/schools/ks3/bitesize/science</a>)</p> <p>Skool: (<a href="http://www.lgfl.skool.co.uk/keystage3.aspx?id=63">www.lgfl.skool.co.uk/keystage3.aspx?id=63</a> )</p> <p>Collins Pupil books 3</p> <p><b>From Learning Resource Centre:</b></p> <p>DK Science Encyclopedia (503)</p> <p>Blue Peter Planet Watch (333.72)</p> <p>Protecting our Planet: Threatened Wetlands by Catherine Chambers (333.91)</p> <p>Why Science Matters: Managing Water (333.91)</p> <p>What if We do Nothing? Fossil Fuels (333.82)</p>

Year	Topic/Project	Additional Information	Getting the best marks	Additional Resources
				<p>Earth SOS: Ozone Hole by Sally Morgan (363.738)</p> <p>Science at the Edge: Global Warming (363.738)</p> <p>Science at the Edge: Alternative Energy Sources (333.794)</p> <p>See for Yourself: Energy (333.954)</p> <p>Conservation by J Pipe (333.954)</p> <p>Green Living for Dummies (333.72)</p> <p>Protect our Planet: Polluted Air (363.739)</p> <p>Global Warming for Beginners (363. 738)</p> <p>Al Gore: an Inconvenient Truth (363.738)</p> <p>The Impact of Climate Change by Carolyn Fry (363.738)</p>

