



# Computing - overview of topics to be taught 2016/17



## E-Safety

E-safety underpins everything we do and will be a continued focus throughout the year as well as being taught discreetly as detailed below. E--safety links will be made through other subjects and topic work and children will be taught how to develop strategies to keep themselves safe when using technology. Age appropriate resources such as Sid’s Top Tips, SMART rules, Think U Know and Ceop’s Conduct, Content, Contact advice will be used to develop these strategies. Children will learn how to keep personal information private and where to go for help and support if they are worried.

## Online Communication

Opportunities should also be sought to communicate and collaborate using school approved, age appropriate online technologies (email, video conferencing, blogs, forums and safe social networking sites).

<b>Year 1</b>	<b>Programming</b>		<b>E-safety</b>	<b>Data</b>	<b>Multimedia</b>	<b>Networks &amp; Internet/ E-safety</b>
	<ul style="list-style-type: none"> <li>Floor and on-screen robots</li> <li>Explore Digital Devices including sound recorders</li> <li>Explore Simulations</li> </ul>		<ul style="list-style-type: none"> <li>Understanding e-safety rules</li> <li>Safer Internet Day</li> </ul>	<ul style="list-style-type: none"> <li>Explore dataloggers</li> <li>Pictograms</li> <li>Simple graphs</li> </ul>	<ul style="list-style-type: none"> <li>Keyboard skills</li> <li>Simple presentations</li> <li>Create pictures using a paint package</li> </ul>	<ul style="list-style-type: none"> <li>Use simple navigation buttons</li> <li>Simple searches</li> <li>Talk about websites</li> </ul>
<b>Year 2</b>	<b>Multimedia (Text &amp; Graphics)</b>	<b>Programming</b>	<b>Multimedia/ E-safety</b>		<b>Networks &amp; Internet/ E-safety/ Multimedia</b>	<b>Multimedia (digital Photography)/ Networks</b>
	<ul style="list-style-type: none"> <li>Keyboard skills</li> <li>Use software (e.g. 2Create a story, 2Publish+, Word) to create publications and presentations using different text and image styles.</li> <li>Use a paint package to communicate ideas</li> </ul>	<ul style="list-style-type: none"> <li>Floor and on-screen robots</li> <li>Exploring Digital Devices</li> <li>Exploring Simulations</li> </ul>	<ul style="list-style-type: none"> <li>Safer Internet Day (Term 3)</li> <li>Explore electronic music and sound devices</li> <li>Use software such as Compose World Create &amp; 2Compose to explore, record and change sounds and music</li> </ul>		<ul style="list-style-type: none"> <li>Discuss simple blogs and websites</li> <li>E-safety rules</li> <li>Develop keyboard skills</li> </ul>	<ul style="list-style-type: none"> <li>Develop typing skills</li> <li>Take and edit digital photographs using simple photo editing programs</li> <li>Save, locate and retrieve digital photographs</li> </ul>
<p>← Collect, organise and classify data to answer questions - links to Maths →</p>						



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<p style="text-align: center; font-size: 24pt; font-weight: bold;">Year 3</p>	<p style="text-align: center; font-weight: bold;">Networks &amp; Internet/ E-safety/ Multimedia</p> <ul style="list-style-type: none"> <li>• Develop keyboard &amp; typing skills</li> <li>• Discuss different computer networks</li> <li>• Open, create and send emails</li> <li>• Explore safe social networking sites (e.g. Makewaves)</li> </ul>		<p style="text-align: center; font-weight: bold;">Data/ E-safety</p> <ul style="list-style-type: none"> <li>• Safer Internet Day (Term 3)</li> <li>• Use a datalogger to collect data</li> <li>• Create databases to answer simple questions</li> </ul>	<p style="text-align: center; font-weight: bold;">Programming</p> <ul style="list-style-type: none"> <li>• Explore how computer games have been created using programming language</li> <li>• Use computer algorithms to control floor (Lego) and on-screen Robots (links to D.T)</li> </ul>	<p style="text-align: center; font-weight: bold;">Multimedia</p> <ul style="list-style-type: none"> <li>• Develop research skills using search engines</li> <li>• Use ICT to record voice and sounds</li> <li>• Use a range of software (e.g. Power Point, Publisher) to present information</li> </ul>	<p style="text-align: center; font-weight: bold;">Programming (Simulations)</p> <ul style="list-style-type: none"> <li>• Explore the effects of changing variables using on-screen simulations (science simulation to light up a bulb)</li> </ul>
	<p style="text-align: center; font-size: 24pt; font-weight: bold;">Year 4</p>	<p style="text-align: center; font-weight: bold;">Networks &amp; the Internet/E-safety/ Multimedia</p> <ul style="list-style-type: none"> <li>• On-line research &amp; navigation/E-safety rules</li> <li>• Typing skills - shortcut keys</li> </ul>	<p style="text-align: center; font-weight: bold;">Multimedia</p> <ul style="list-style-type: none"> <li>• Import and edit digital images using graphical modelling</li> <li>• Edit pictures using photo manipulation software.</li> <li>• Use a graphical modelling program to create a piece of artwork (2Draw)</li> </ul>	<p style="text-align: center; font-weight: bold;">E-safety/Programming</p> <ul style="list-style-type: none"> <li>• Safer Internet day - (Conduct, Content, Contact)</li> <li>• Write algorithms to control a program</li> <li>• Write and debug programs using Scratch</li> </ul>	<p style="text-align: center; font-weight: bold;">Multimedia (Graphical Modelling)</p> <ul style="list-style-type: none"> <li>• Use a graphical modelling program to create an aerial view (Publisher)</li> </ul>	<p style="text-align: center; font-weight: bold;">Networks &amp; the Internet/ Multimedia</p> <ul style="list-style-type: none"> <li>• Develop online research &amp; evaluation skills</li> <li>• Use a range of tools to design and create a multimedia presentation (e.g. Movie Maker)</li> <li>• Collaborate and communicate online (e.g. Makewaves, Flashmeeting)</li> </ul>



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<p><b>Year 5</b></p>	<p><b>Networks &amp; the Internet/E-safety/ Programming (Data)</b></p> <ul style="list-style-type: none"> <li>• Explore computer networks including the internet/ Personal online safety</li> <li>• Extend typing and keyboard skills</li> <li>• Write programs to control &amp; simulate events (Lego Mind-storms datalogging)</li> </ul>	<p><b>Programming</b></p> <ul style="list-style-type: none"> <li>• Create a sequence of instructions to control multiple outputs using Lego NXT (links to D.T)</li> <li>• Detect and correct errors in programs</li> </ul>	<p><b>Networks &amp; the Internet/E-safety/ Multimedia</b></p> <ul style="list-style-type: none"> <li>• Safer Internet Day (Conduct, Content, Contact)</li> <li>• Use graphical modelling software to design and develop a plan</li> </ul>	<p><b>Multimedia/ Programming</b></p> <ul style="list-style-type: none"> <li>• Design a game using Scratch to solve open ended problems</li> </ul>	<p><b>Data/ Multimedia</b></p> <ul style="list-style-type: none"> <li>• Use simple formulae in spreadsheets (Excel) to solve problems</li> <li>• Complex searches on databases to answer questions</li> </ul>	<p><b>Multimedia</b></p> <ul style="list-style-type: none"> <li>• Plan and create an animated sequence using Pivotstick/ 2Animate</li> </ul>
<p>← Use a variety of multimedia software and tools to enhance presentations (Linked to topic work) →</p>						
<p><b>Year 6</b></p>	<p><b>Networks &amp; the Internet/E-safety</b></p> <ul style="list-style-type: none"> <li>• Evaluate digital content</li> <li>• Consider plausibility and appropriateness of online information</li> <li>• Develop understanding of how computer networks work including the internet</li> </ul>	<p><b>Multimedia</b></p> <ul style="list-style-type: none"> <li>• Produce interactive multimedia presentations using PowerPoint</li> </ul>	<p><b>E-safety/ Data</b></p> <ul style="list-style-type: none"> <li>• Safer Internet Day (Conduct, Content, Contact)</li> <li>• Develop spreadsheet skills using advanced formulae (Excel)</li> </ul>	<p><b>Data</b></p> <ul style="list-style-type: none"> <li>• Change data and formulae in spreadsheets to answer 'what if..?' questions and check predictions</li> </ul>	<p><b>Multimedia</b></p> <ul style="list-style-type: none"> <li>• Create movies and animations</li> <li>• Create sounds and compositions for use in movies and animations</li> </ul>	<p><b>Programming</b></p> <ul style="list-style-type: none"> <li>• Create 3D worlds and models using Kodu</li> <li>• Solve open ended problems using Kodu and other programming languages</li> </ul>