Computing – overview of topics to be taught 2017/8

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).

<table>
<tr><td>Year 1</td><td colspan="2">Programming
Floor and on-screen robots
Explore Digital Devices including sound recorders
Explore Simulations</td><td>E-safety
Understanding e-safety rules
Safer Internet Day</td><td>Data
Explore dataloggers
Pictograms
Simple graphs</td><td>Multimedia
Keyboard skills
Simple presentations
Create pictures using a paint package</td><td>Networks & Internet/ E-safety
Use simple navigation buttons
Simple searches
Talk about websites</td></tr>
<tr><td>Year 2</td><td>Multimedia (Text & Graphics)
Keyboard skills
Use software (e.g. 2Create a story, 2Publish+, Word) to create publications and presentations using different text and image styles.
Use a paint package to communicate ideas</td><td>Programming
Floor and on-screen robots
Exploring Digital Devices
Exploring Simulations</td><td colspan="2">Multimedia/ E-safety
Safer Internet Day (Term 3)
Explore electronic music and sound devices
Use software such as Compose World Create & 2Compose to explore, record and change sounds and music</td><td>Networks & Internet/ E-safety/ Multimedia
Discuss simple blogs and websites
E-safety rules
Develop keyboard skills</td><td>Multimedia (digital Photography)/ Networks
Develop typing skills
Take and edit digital photographs using simple photo editing programs
Save, locate and retrieve digital photographs</td></tr>
</table>

← Collect, organise and classify data to answer questions – links to Maths →

Computing – overview of topics to be taught 2017/18

Year 3	**Networks & Internet/ E-safety/ Multimedia** • Develop keyboard & typing skills • Discuss different computer networks • Open, create and send emails • Explore safe social networking sites (e.g. Makewaves)		**Data/ E-safety** • Safer Internet Day (Term 3) • Use a datalogger to collect data • Create databases to answer simple questions	**Programming** • Explore how computer games have been created using programming language • Use computer algorithms to control floor (Lego) and on-screen Robots (links to D.T)	**Multimedia** • Develop research skills using search engines • Use ICT to record voice and sounds • Use a range of software (e.g. Power Point, Publisher) to present information	**Programming (Simulations)** • Explore the effects of changing variables using on-screen simulations (science simulation to light up a bulb)
Year 4	**Networks & the Internet/E-safety/ Multimedia** • On-line research & navigation/E-safety rules • Typing skills – shortcut keys	**Multimedia** • Import and edit digital images using graphical modelling • Edit pictures using photo manipulation software. • Use a graphical modelling program to create a piece of artwork (2Draw)	**E-safety/Programming** • Safer Internet day – (Conduct, Content, Contact) • Write algorithms to control a program • Write and debug programs using Scratch	**Multimedia (Graphical Modelling)** • Use a graphical modelling program to create an aerial view (Publisher)	**Networks & the Internet/ Multimedia** • Develop online research & evaluation skills • Use a range of tools to design and create a multimedia presentation (e.g. Movie Maker) • Collaborate and communicate online (e.g. Makewaves, Flashmeeting)	**Data/Programming** • Collect, organise and interpret data using dataloggers and databases • Create databases to classify data and answer questions (Branching databases, 2Investigate) • Create a simple animation using Pivotstick/2Animate

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Year 5	**Networks & the Internet/E-safety/ Programming (Data)** • Explore computer networks including the internet/ Personal online safety • Extend typing and keyboard skills • Write programs to control & simulate events (Lego Mindstorms datalogging)	**Programming** • Create a sequence of instructions to control multiple outputs using Lego NXT (links to D.T) • Detect and correct errors in programs	**Networks & the Internet/E-safety/ Multimedia** • Safer Internet Day (Conduct, Content, Contact) • Use graphical modelling software to design and develop a plan	**Multimedia/ Programming** • Design a game using Scratch to solve open ended problems	**Data/ Multimedia** • Use simple formulae in spreadsheets (Excel) to solve problems • Complex searches on databases to answer questions	**Multimedia** • Plan and create an animated sequence using Pivotstick/ 2Animate
	← Use a variety of multimedia software and tools to enhance presentations →					
Year 6	**Multimedia** • Produce interactive multimedia presentations using PowerPoint	**SAFE (Makewaves)** • Evaluate digital content • Consider plausibility and appropriateness of online information • Develop understanding of how computer networks work including the internet	**Data** • Develop spreadsheet skills using advanced formulae (Excel) • Change data and formulae in spreadsheets to answer 'what if..? questions and check predictions	**Networks and the Internet** **(PC Basics)** • Learn about input and output devices • Learn how a computer, wireless Internet • To learn to decode binary numbers	**Programming** • Create 3D worlds and models using Kodu • Solve open ended problems using Kodu and other programming languages	**Programming** • Create 3D worlds and models using Kodu • Solve open ended problems using Kodu and other programming languages