

Progression in Computing

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
	National Curriculum: use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.		National Curriculum: use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.			
<p>ONLINE SAFETY</p> <p>SMART</p> <p>SAFE: Communicating</p> <p>SAFE: Sharing</p> <p>MEETING</p> <p>ACCEPTING</p> <p>RELIABLE</p> <p>TELL</p> <p>Using technology respectfully and responsibly.</p>	<p>thinkuknow:</p> <p>Seeking permission before images are shared of others.</p> <p>Understanding that once an image is shared, many may have access to it.</p> <p>Reporting upsetting online content to trusted adults.</p> <p>Purple Mash:</p> <p>Logging in safely and understanding 'ownership'.</p>	<p>Purple Mash: Communicating kindly online.</p> <p>thinkuknow: Understanding that those who they choose to communicate with on the internet are not always truthful.</p> <p>Purple Mash: Thinking carefully about the content that we share on the internet (both of ourselves and others), and understanding that what we share leaves a 'digital footprint'.</p> <p>thinkuknow: Understanding what is meant by 'personal information' and the consequences of sharing this online.</p> <p>Purple Mash: Searching the internet safely and understanding that the internet contains some unsuitable material.</p> <p>thinkuknow: Reporting upsetting online content to trusted adults.</p> <p>Purple Mash: Understanding the impact of screen time on health.</p>	<p>Purple Mash: Understanding that communication online can be easily misinterpreted.</p> <p>Purple Mash: Understanding that communication online is not always kind and truthful.</p> <p>Purple Mash: Understanding cyber bullying, its impact and how internet users can be traced.</p> <p>Purple Mash: Asking permission from others before sharing content related to them, including photos.</p> <p>Purple Mash: Understanding that information on the internet is not always reliable.</p> <p>Purple Mash: Choosing appropriate, reputable websites to corroborate information.</p> <p>SMART: Reporting upsetting online content to trusted adults or an appropriate source.</p> <p>Purple Mash: Choosing a strong password and why this is important.</p> <p>Purple Mash: Understanding PEGI ratings and their importance.</p>	<p>thinkuknow: Identifying the signs of manipulative, pressuring or threatening behaviour online.</p> <p>thinkuknow: Taking measures to control their privacy and 'digital footprint'.</p> <p>Purple Mash: Identifying and reporting 'phishing' and 'SPAM'.</p> <p>Purple Mash: Identifying the risks of installing software (e.g. viruses and malware) and the benefits of installing software.</p> <p>thinkuknow: Reporting upsetting online content to trusted adults or an appropriate source.</p> <p>Purple Mash: Copying the work of others and presenting it as their own is known as 'plagiarism'.</p> <p>Purple Mash: Understanding the consequences of 'plagiarism'.</p> <p>thinkuknow: Understanding their rights online, and respecting those of others.</p>	<p>Purple Mash: Choosing the right method of communication to avoid misinterpretation.</p> <p>Purple Mash: Communicating with strangers, and how these risks can be dealt with.</p> <p>Purple Mash: Awareness of appropriate and inappropriate text, photographs and videos and the impact of sharing these online.</p> <p>thinkuknow: Understanding what is meant by 'personal information' and the consequences of sharing this online, in the context of social media platforms.</p> <p>thinkuknow: Developing an awareness of potential risks, including communicating with strangers, and how these risks can be dealt with.</p> <p>thinkuknow: Reporting upsetting online content to trusted adults or an appropriate source.</p> <p>Purple Mash: Understanding the advantages, disadvantages, permissions and purposes of altering an image digitally, and the reasons for this.</p> <p>Purple Mash: Citing sources to avoid 'plagiarism'</p> <p>Purple Mash: Understanding 'copyright' and how to find out 'usage rights'.</p>	<p>Be Internet Awesome: Defining what being positive means and looks like online and offline.</p> <p>Leading with positivity in online communications.</p> <p>Be Internet Awesome: Understanding how a 'digital footprint' may impact upon the future of the user.</p> <p>thinkuknow: Understanding the impact of live-streaming: self-esteem and attention.</p> <p>thinkuknow: Understanding the impact of live-streaming: positive and unhealthy relationships.</p> <p>Be Internet Awesome: Understanding what types of situations call for getting help or talking things out with a trusted adult.</p> <p>Considering what options there are for being brave and why bringing adults into the conversation is important.</p>

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Key Concepts: Algorithms (AL); Computing Systems (CS); Creating Media (CM); Data and Information (DI); Design and Development (DD); Effective Use of Tools (ET); Networks (NW); Programming (PG); Safety and Security (SS); Impact of Technology (IT)

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CREATING MEDIA Select and create a range of media including texts, images, sounds and video.	DIGITAL PAINTING (CM/ET) Computer - Microsoft Paint Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.	DIGITAL PHOTOGRAPHY (CM/ET) iPads/Computer – Pixlr Capturing and changing digital photographs for different purposes.	STOP-FRAME ANIMATION (CM/ET) iPad – iMotion Capturing and editing digital still images to produce a stop-frame animation that tells a story.	AUDIO EDITING ET/CM Computer – Audacity Capturing and editing audio to produce a podcast, ensuring that copyright is considered.	VIDEO EDITING CM/DD Computer – Microsoft Photos Planning, capturing, and editing video to produce a short film.	3D MODELLING CM/DD Computer – TinkerCAD Planning, developing, and evaluating 3D computer models of physical objects.
	DIGITAL WRITING (CM/ET) Computer - Microsoft Word Using a computer to create and format text, before comparing to writing non-digitally.	MAKING MUSIC (CM/DD) Computer - Chrome Music Lab Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.	DESKTOP PUBLISHING (CM/ET) Computer - Adobe Spark Creating documents by modifying text, images, and page layouts for a specified purpose.	PHOTO EDITING ET/CM Computer – paint.net Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.	VECTOR DRAWING ET/CM Computer – Google Drawing Creating images in a drawing program by using layers and groups of objects.	WEBPAGE CREATION CM/DD Computer – Google Sites Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.
PROGRAMMING Create software to allow computers to solve problems.	MOVING A ROBOT (AL/PG) Bee-Bots Writing short algorithms and programs for floor robots, and predicting program outcomes.	ROBOT ALGORITHMS (AL/PG) Bee-Bots Creating and debugging programs, and using logical reasoning to make predictions.	SEQUENCING SOUNDS (PG/DD) Computer – Scratch Creating sequences in a block-based programming language to make music.	REPETITION IN SHAPES (AL/PG) Computer – FMSLogo Using a text-based programming language to explore count-controlled loops when drawing shapes.	SELECTION IN PHYSICAL COMPUTING (PG/CS) Crumble Controllers Exploring conditions and selection using a programmable microcontroller.	VARIABLES IN GAMES (PG/DD) Computer - Scratch Exploring conditions and selection using a programmable microcontroller.
	PROGRAMMING ANIMATIONS (PG/DD) iPads – Scratch Jnr Designing and programming the movement of a character on screen to tell stories.	PROGRAMMING QUIZZES (PG/DD) iPads – Scratch Jnr Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.	EVENTS AND ACTIONS IN PROGRAMS (PG/DD) Computer – Scratch Writing algorithms and programs that use a range of events to trigger sequences of actions.	REPETITION IN GAMES (PG/DD) Computer – Scratch Using a block-based programming language to explore count-controlled and infinite loops when creating a game.	SELECTION IN QUIZZES (AL/PG) Computer – Scratch Exploring selection in programming to design and code an interactive quiz.	SENSING (PG/CS) Micro:Bit Exploring conditions and selection using a programmable microcontroller.
DATA AND INFORMATION Understand how data is stored, organised, and used to represent real-world artefacts and scenarios.	GROUPING DATA (DI/AL) Computer – MS PowerPoint Exploring object labels, then using them to sort and group objects by properties.	PICTOGRAMS (DI/ET) Computer – j2data Pictogram Collecting data in tally charts and using attributes to organise and present data on a computer.	BRANCHING DATABASES (DI/ET) Computer – j2data Branch and Pictogram Building and using branching databases to group objects using yes/no questions.	DATA LOGGING (CS/DI) Data Loggers Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	FLAT-FILE DATABASES (DI/ET) Computer – j2data Database Using a database to order data and create charts to answer questions.	INTRODUCTION TO SPREADSHEETS (DI/ET) Computer – MS Excel Answering questions by using spreadsheets to organise and calculate data.