EUXTON C OF E SUBJECT OVERVIEW AND KEY KNOWLEDGE Computing

Year Group	Coding & Computational Thinking	Spreadsheets	Internet & Email	Art & Design	Music	Databases & Graphing	Writing & Presenting	Communication & Networks
Y1	**Grouping & Sorting** • Know how to sort items on the computer using the 'Grouping' activities in Purple Mash **Lego Builders** • Know how to follow & create simple instructions on the computer **Maze Explorers** • Know how to use the additional direction keys as part of their algorithm • Understand how to change & extend the algorithm list **Coding** • Understand what coding means in computing • Know how to build one- & two-step instructions using the printable code cards	**Spreadsheets** • Know how to use a spreadsheet to help work out a fair way to share items	**Online Safety** • Know where to go for help & support when they have concerns about content or contact on the internet or other online technologies • Know to follow Smartie the Penguin's rules as a source of guidance when online • Know how to login safely • Understand the idea of 'ownership' of their creative work	**Animated Story Books** • Know the difference between a traditional book & an e-book • Know how to add animation & sound to an e-book story		**Pictograms** • Know how to use a pictogram to record the results of an experiment		**Technology outside school** • Understand what is meant by 'technology' • To consider types of technology used in school & out of school

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Y2	**Coding** • Understand what an algorithm is • Know how to create a computer program using simple algorithms • Know what 'debugging' means & how to debug simple programs	**Spreadsheets** • Know how to use a spreadsheet to add amounts & create a block graph manually	**Online Safety** • Know where to go for help & support when they have concerns about content or contact on the internet or other online technologies • Know to follow Smartie the Penguin's rules as a source of guidance when online • Know how to refine searches using the Search tool • Know how to share work electronically using the display boards • Have some knowledge & understanding about sharing more globally on the Internet • Understand that information put online leaves a digital footprint or trail • Understand how 2Repond can teach about how to use email **Effective Searching** • Understand the terminology associated with searching & gain a better understanding about searching on the Internet	**Creating Pictures** • Know how to combine more than one effect in 2Paint a Picture to enhance their patterns	**Making Music** • Understand what happens to a tune when sounds are moved in 2Sequence • Know how to create, upload & use their own recorded sounds	**Questioning** • Understand what is meant by a database • Know how to use a database to answer more complex search questions	**Presenting Ideas** • Know how to make a quiz about a story or class topic using 2Quiz	

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Y3	**Coding** • Understand what a variable is in programming • Understand the need to test & debug a program repeatedly • Understand the importance of saving periodically as part of the code development process	**Spreadsheets** • Know how to create pie charts & bar graphs	**Online Safety** • Know a range of ways to report concerns about content & contact • Know to use the SMART rules as a source of guidance when online • Know what makes a safe password, how to keep passwords safe & the consequences of giving your passwords away • Know where to turn for help if they see inappropriate content or have inappropriate contact from others • Relate cyberbullying to bullying in the real-world & have strategies for dealing with online bullying including screenshot & reporting **Email** • Know how to open a simulated email & respond to it			**Branching Databases** • Understand how YES/NO questions are structured & answered • Know how to use & debug their own branching database **Graphing** • Know how to solve an investigation & present the results in graphic form	**Touch-typing** • Understand the names of the fingers • Understand what is meant by 'top row', 'home row', 'bottom row' & 'space bar' • Know how to use two hands to type the letters on the keyboard	**Simulations** • Evaluate simulations by comparing them with real situations & considering their usefulness

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Y4	**Coding** • Know how to create a program with a character that repeats actions • Recognise the need to start coding at a basic level of abstraction to remove superfluous details from their program that do not contribute to the aim of the task **Logo** • Know what the different instructions are in Logo & how to type them • Predict what shapes will be made from Logo instructions • Know how to create 'flowers' using Logo **Effective Searching** • Know how to analyse the contents of a web page for clues about the credibility of the information	**Spreadsheets** • Know how to add a formula to a cell to automatically make a calculation in that cell • Know how to use a spreadsheet made in 2Calculate to check understanding of a mathematical concept	**Online Safety** • Know a range of ways to report concerns about content & contact • Know to use the SMART rules as a source of guidance when online • Know that security symbols such as a padlock protect their identity online • Know the meaning of the term 'phishing' & be aware of the existence of scam websites • Identify possible risks of installing free & paid for software • Understand the importance of balancing game & screen time with other parts of their lives	**Animation** • Know what the Onion Skin tool does in animation • Know what stop motion animation is & how it is created • Use ideas from existing stop motion films to recreate their own animation			**Writing for Different Audiences** • Interpret a variety of incoming communications & used these to build up the details of a story • Know how to use a simulated scenario to produce a news report & for a community campaign	**Hardware Investigators** • Understand the different parts that make up a desktop computer • Know what the function of the different parts of the computer is

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Y5	**Coding** • Understand what a variable is in programming • Know some ways that text variables can be used in coding • Know how to create a playable, competitive game	**Spreadsheets** • Know how to create a formula in a spreadsheet including the advanced mode	**Online Safety** • Know a range of ways to report concerns about content & contact • Know to use the SMART rules as a source of guidance when online • Know what Childnet SMART CREW is & have thought critically about the information that they share online both about themselves & others • Know to use the SMART rules as a source of guidance when online • Show an understanding of the advantages & disadvantages of different forms of communication & when it is appropriate to use each	**Game Creator** • Know how to create the game environment & the game quest • Evaluate own & peers' games to help improve designs for the future • Know how to make their game more unique by selecting the appropriate options to maximise the playability **3D Modelling** • Know how to edit the polygon 3D models to design a 3D model for a purpose • Understand printing & making		**Databases** • Know what a database field is & correctly add field information • Understand how to word questions so that they can be effectively answered using a search of their database	**Concept Maps** • Understand the need for visual representation when generating & discussing complex ideas • Understand & use the correct vocabulary when creating a concept map • Understand how a concept map can be used to retell stories & information	

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Y6	**Coding** • Know how to organise code into functions & to eliminate surplus code in the program • Know how to use flowcharts to test & debug a program **Text Adventures** • Know how to create their own text-based adventure based upon a map • Know how to use coding concepts of functions, two-way selection (if/else statements) & repetition in conjunction with one another to code their game	**Spreadsheets** • Know how to create a spreadsheet to answer a mathematical question • Know how to use a spreadsheet to model a real-life situation & come up with solutions that can be applied to real life	**Online Safety** • Know a range of ways to report concerns about content & contact • Know to use the SMART rules as a source of guidance when online • Understand what is shared impacts upon themselves & upon others in the long-term • Know about the consequences of promoting inappropriate content online & how to put a stop to such behaviour when they experience it or witness it as a bystander • Understand the importance of balancing game & screen time with other parts of their lives • Understand the approval process that their posts go through & demonstrate an awareness of the issues surrounding inappropriate posts & cyberbullying				**Blogging** • Understand how a blog can be used as an informative text • Understand the key features of a blog • Understand that the way in which information is presented has an impact upon the audience • Understand the approval process that their posts go through & demonstrate an awareness of the issues surrounding inappropriate posts & cyberbullying **Quizzing** • Understand the different question types within 2Quiz • Know how to make a quiz that requires the player to search a database	**Networks** • Know the difference between the World Wide Web & the internet • Know about their school network & how to access it • Consider some of the major changes in technology which have taken place during their lifetime & the lifetime of their teacher/another adult & think about what the future might hold