

Computing Subject Skeleton Overview

“It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change.” Charles Darwin



Essential Knowledge

Computing Overview						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Christian Values	FORGIVENESS		PERSEVERANCE		RESPECT	
	FRIENDSHIP	TRUTHFULNESS	WISDOM	COMPASSION	JUSTICE	RESPONSIBILITY
EYFS	ELG (Technology): There are no early learning goals that directly relate to computing objectives, though it is still expected that children will be introduced to appropriate technology and use it within provision. - Learning how to log onto Purple Mash and use age-appropriate software eg 2 Paint and set 2dos related to our topic work - We will become more independent using ICT equipment in the classroom eg taking photos for Tapestry, timers - We will use the internet to help find out facts to support our classroom work - Use some simple programs on the iPads that are cross curricular and support our learning, 'Bugs and Buttons' 'Pre-Motor Dexteria' Internet Safety - In our PSHE lessons we will use the SCARF program to look at 'Keeping Safe on-line' and talking about ways to stay safe when using technology.					
Y1	Information Technology Purple Mash Unit 1.3: Pictograms (2Count) Pupils will know how: To use a pictogram to record the results of an experiment.	Digital Literacy (includes Internet Safety) Purple Mash Unit 1.1: Online Safety and Exploring Purple Mash Pupils will know how: - To log in safely. - To learn how to find saved work in the Online Work area - To learn how to open, save and print. - To understand the importance of logging out	Computer Science Purple Mash Unit 1.5 – Maze Explorers (2Go) Pupils will know how: To understand how to create and debug a set of instructions (algorithm).	Information Technology Purple Mash Unit 1.6 – Animated Story Books (2CreateAStory) Pupils will know how: To add animation to a story.	Computer Science Purple Mash Unit 1.7 – Coding (2Code) Pupils will know how: - To use code to make a computer program. - To plan and make a computer program.	Information Technology Purple Mash – Unit 1.8 Spreadsheets (2Calculate) Pupils will know how: To enter data into spreadsheet cells.

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Y2	Information Technology Purple Mash Unit 2.5 – Effective Searching (Google) Pupils will know how: To gain a better understanding of searching on the Internet.	Information Technology Purple Mash Unit 2.6 Creating Pictures (2PaintAPicture) Pupils will know how: - To learn the functions of the 2Paint a Picture tool. Digital Literacy (includes Internet Safety) Purple Mash Unit 2.2 Online Safety Pupils will know how: - To introduce Email as a communication tool using 2Respond simulations. - To open and send simple online communications in the form of email. - To understand that information put online leaves a digital footprint or trail. - To identify the steps that can be taken to keep personal data and hardware secure.	Computer Science Purple Mash Unit 2.1 – Coding (2Code) Pupils will know how: - To create a computer program using an algorithm. - To understand that algorithms follow a sequence. - To understand and debug simple programs.	Information Technology Purple Mash Unit 2.8 – Presenting Ideas (2Quiz, 2Connect + various software) Pupils will be know how: - To explore how a story can be presented in different ways. Digital Literacy (includes Internet Safety) Pupils will know how: - how to behave respectfully when they are on-line - what private information to keep off line - what to do if they feel unsafe or concerned	Information Technology Purple Mash Unit 2.3 – Spreadsheets (2Calculate) Pupils will know how: To use 2Calculate to collect data and produce a graph	Information Technology Purple Mash Unit 2.4 – Questioning (2Investigate & 2Question) Pupils will know how: - To construct a binary tree to identify items. - To use 2Question (a binary tree database) to answer questions. Purple Mash Unit 2.7 – Making Music (2Sequence) Pupils will know how: - To make music digitally using 2Sequence.
Y3	Information Technology Purple Mash Unit 3.8 Graphing (2Graph) Pupils will know how: To enter data into a graph and answer questions.	Information Technology Purple Mash Unit 3.3 Spreadsheets (2Calculate) Pupils will know how: To use the symbols more than, less than and equal to, to compare values.	Information Technology Purple Mash Unit 3.4 Touch Typing (2Type) Pupils will know how: To learn how to use the home, top and bottom row keys.	Information Technology Purple Mash Unit 3.7 Simulations (2Simulate, 2Publish) Pupils will know how: To analyse and evaluate a simulation.	Computer Science Purple Mash Unit 3.1 Coding (2Code) Pupils will know how: To understand what a flowchart is and how flowcharts are used in	Information Technology Purple Mash Unit 3.6 Branching Databases (2Question) Pupils will know how:

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		- To use 2Calculate to collect data and produce a variety of graphs. Digital Literacy (Including Internet Safety) Purple Mash Unit 3.2 Online Safety (Various software) Pupils will know how: - To learn methods for keeping passwords safe.	To practise typing with the left and right hand.	Computer Science & Digital Literacy (Including Internet Safety) Purple Mash Unit 3.5 Email (2Email, 2Connect, 2DIY) Pupils will know how: - To open and respond to an email using an address book. - To learn how to use email safely. - To add an attachment to an email.	computer programming. To understand how to use the repeat command.	To complete a branching database using 2Question.
Y4	Computer Science Purple Mash Unit 4.8 Hardware Investigators Pupils will know how: - To recall the different parts that make up a computer. Information Technology Purple Mash Unit 4.4 Writing For Different Audiences (2Email, 2Connect & 2DIY) Pupils will know how: - To explore how font size and style can affect the impact of a text.	Digital Literacy (Including Internet Safety) Purple Mash Unit 4.2 Online Safety (Various software) Pupils will know how: - To understand how children can protect themselves from online identity theft. - To understand that information put online leaves a digital footprint or trail and that this can aid identity theft. - To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism. - To understand the importance of balancing game and screen time with other parts of their lives.	Computer Science Purple Mash Unit 4.7 Effective Searching (Google) Pupils will know how: - To use search effectively to find out information. Computer Science Purple Mash Unit 4.1 Coding (2Code) Pupils will know how: - To understand how an IF statement works. - To understand the 'repeat until' command. - To understand how an IF/ELSE statement works. - To understand what a variable is in programming.	Information Technology Purple Mash Unit 4.6 Animation (2Animate) Pupils will know how: - To learn about onion skinning in animation. - To add backgrounds and sounds to animations.	Computer Science Purple Mash Unit 4.5 Logo (Logo) Pupils will know how: - To input simple instructions in Logo. - To use the Repeat function in Logo to create shapes.	Information Technology Purple Mash Unit 4.3 Spreadsheets (2Calculate) Pupils will know how: To add a formula to a cell to automatically make a calculation in that cell.

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Y5	Information Technology Purple Mash Unit 5.7 Concept Maps (2Connect) Pupils will know how: - To create a concept map. - To create a collaborative concept map and present this to an audience.	Information Technology Purple Mash Unit 5.4 Databases (2Investigate & 2Question) Pupils will know how: - To learn how to search for information in a database. - To create a database around a chosen topic Digital Literacy (Including Internet Safety) Purple Mash Unit 5.2 Online Safety Pupils will know how: - To know how to maintain secure passwords. - To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online.	Information Technology Purple Mash Unit 5.3 Spreadsheets (2Calculate and Microsoft Excel) Pupils will know how: - To use a spreadsheet to model a real-life problem. - To use formulae to calculate area and perimeter of shapes.	Information Technology Purple Mash Unit 5.6 3D Modelling (2Design) Pupils will know how: - To design a 3D Model to fit certain criteria. Purple Mash Unit 5.8 Word Processing (Microsoft Word) Pupils will know how: - To add and edit images to a word document. - To change the look of text within a document. - To use tables within text to present information.	Computer Science Purple Mash Unit 5.5 Game Creator (2DIY 3D) Pupils will know how: To design and create the game quest.	Computer Science Coding on Scratch or Purple Mash Unit 5.1 Coding (2Code) Pupils will know how: - To program a simulation using 2Code. - To begin to understand what a function is and how functions work in code. - To understand how to create a string.
Y6	Computer Science Purple Mash Unit 6.6 Networks Pupils will know how: To learn about what the Internet consists of. Information Technology Using Search Engines (Google) Pupils will know how:	Digital Literacy (Including Internet Safety) Purple Mash Unit 6.4 Blogging (2Blog + school blog site) Pupils will know how: To understand how to write a blog and a blog post.	Computer Science Coding on Scratch or Purple Mash Unit 6.1 Coding (2Code) Pupils will know how: - To design a playable game with a timer and a score. - To understand how the launch command works. - To use flowcharts to create and debug code.	Digital Literacy (Including Internet Safety) Purple Mash Unit 6.2 Online Safety Pupils will know how: - To identify benefits and risks of mobile devices broadcasting the location of the user/device. - To identify the benefits and risks of giving personal information.	Computer Science Purple Mash Unit 6.8 Understanding Binary (2Code) Pupils will know how: - To examine how whole numbers are used as the basis for representing all types of data in digital systems. - To understand that binary represents numbers using 1s and	Information Technology Purple Mash Unit 6.7 Quizzing (2Quiz, 2DIY, Text Toolkit, 2Investigate) Pupils will know how: - To create a picture-based quiz - To make a quiz that requires the player to search a database. Purple Mash Unit 6.9 Spreadsheets (Microsoft Excel)

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	• to choice vocabulary carefully when searching • to surf and sift results • choose to search images, maps, etc • copy and paste information and images safely and correctly.			• To have a clear idea of appropriate online behaviour. • To understand the importance of balancing game and screen time with other parts of their lives.	0s and these represent the on and off electrical states respectively in hardware and robotics.	Pupils will know how: • To navigate and enter data into cells. • To introduce some basic data formulae in Excel for percentages, averages and max and min numbers. • To create a variety of graphs in Excel. • To apply spreadsheet skills to solving problems
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