Progression of Knowledge, Skills and Understanding - Computing

This document links to Purple Mash and the units available for Years 1 and 2.	**Essential Computing Vocabulary for Key Stage 1** **Algorithm -** A set of instruction for a computer, split into little steps **Coding -** Writing the language used to give instructions to computers **Cyberbullying** – Unkind words and things done on the internet **De-bug** – Fixing a sequence in a computer program **E-Safety** – Doing things to make sure you are safe when using the internet **Program/Sequence** – A set of step by step instructions to make a computer do a task

Information Technology

	Year 1 *Links to Unit 1.3/1.6/1.8*	**Year 2** *Links to Unit 2.3/2.4/2.6/2.7/2.8*
Skills: (Applicable lessons in brackets)	Sort sound, pictures and text (1.2) Add sound, pictures and text to a program such as 2Create a Story (1.6) Change content on a file such as text, sound and images (1.3/1.6/1.7/1.8) Name, save and retrieve work (1.2/1.3/1.6/1.7/1.8)	Organise data e.g. using a database such as 2Investigate (2.3/2.4) Find data using specific searches e.g. using 2Investigate (2.4/2.5) Use several programs to organise information e.g. use binary trees such as 2Question or spreadsheets such as 2Calculate (2.4/2.8) Edit digital data such as data in music composition software like 2 sequence (2.7 and most units) Name, save and retrieve my work (2.3/2.4/2.6/2.7/2.8 & most units) Include photos, text and sounds in my creations (2.8/2.6)
Prior Knowledge:	• *Can the children use a keyboard?* • *Do the children know how to save their work?* • *Do the children know how to access their username and password?* • *Do the children understand what is meant by sound, text and pictures?*	• *Have the children used a database or physical binary tree in maths or science?* • *Have they used a search engine before?* • *Do they know what a musical composition is?* • *Can they make one with instruments? Do they understand that by saving and retrieving their work they can edit it and improve it?*
NC Objective: Use technology purposefully to create, organise, store, manipulate and retrieve digital content.		

Computer Science		
	Year 1 *Coding unit 1.7 but also links to units 1.2/1.4/1.5*	**Year 2** *Coding Unit 2.1*
Skills: (Applicable lessons in brackets)	Explain that an algorithm is a set of instructions (1.4/1.5) Knows that a computer program turns an algorithm into a code that the computer can understand (1.4/1.7) Debug to work out what is wrong when the steps are out of order in instructions (1.4/1.5) Understand that if something does not work out how it should it is because my code is incorrect. (1.7) Try to fix my code if it isn't working properly (1.7) Make good guesses of what is going to happen in a program. For example, where the turtle might go. (1.5/1.7)	Explain an algorithm is a set of instructions to complete a task. (2.1) Know I need to carefully plan my algorithm so it will work when I make it into code. (2.1) Design a simple program using 2Code that achieves a purpose. (2.1) Find and correct some errors in my program. (2.1) Say what will happen in a program. (2.1) Spot something in a program that has an action or effect (does something).(2.1)
Prior Knowledge:	• Can the children talk about what an instruction is? • What is an algorithm? • What does debug mean? • Have they used or followed instructions before?	• What is an algorithm? Why is it useful in computing? • Can the children talk about why it is important to be able to fix a code that is not working properly? • Do they understand what code blocks, objects and actions are?
NC Objective: Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions		
NC Objective: Create and debug simple programs		
NC Objective: Use logical reasoning to predict the behaviour of simple programs		

Digital Literacy		
	Year 1 *Links to Unit 1.1 and 1.9*	**Year 2** *Links to Unit 2.2 and 2.5*
Skills: (Applicable lessons in brackets)	Say what technology is. (1.9) Say what examples of technology are in school. (1.9) Say what examples of technology are at home. (1.9) Know that a chair uses old technology and a smart phone uses new technology. (1.9) Keep my login safe. (1.1 and most units) Save my work in a safe place such as 'My Work' folder. (1.1 and most units)	Find information I need using a search engine. (2.5) Know the consequences of not searching online safely. (2.2,/2.5) Share work and communicate electronically – for example using 2Email or the display boards. (2.2 and others) Report unkind behaviour and things that upset me online, to a trusted adult. (2.2) See where technology is used at school such as in the office or canteen. (2.2) Understand that my creations such as programs in 2Code, need similar skills to the adult world. e.g. The program used for collecting money for school trips. (2.1)
Prior Knowledge:	• Can the children talk about technology they have at home and in school? • Can they talk about how technology helps us in our daily lives? • Do the children know why we have logins and passwords? • What do the children currently know about being safe online? • What can they do if they are worried about something they see online?	• Do they know what emails are? • Have they used a search bar? What does it do? • Have they heard of a digital footprint? • Do they know what the internet is? • Who can they talk to if they are worried about online safety?
NC Objective: Recognise common uses of information technology beyond school		
NC Objective: 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		

	Each Unit on Purple Mash has its own knowledge organiser listing specific vocabulary, key learning and key questions for that specific unit. Access the concept maps for each unit to ascertain the prior knowledge the children have related to the unit focus. **With the exception of unit 1.1, these units can be taught in any order to meet the needs of your wider curriculum. Refer to the year group overview for support in the selection of units to teach.**