Knowledge Mat – Online Safety

Subject Specific Vocabulary		Sticky Knowledge	Key questions
Copyright	When the rights to something belong to a specific person.	To understand how they can protect themselves from online identity theft.	What is meant by a digital footprint ? A digital footprint is the information that exists about a person based upon sites that they have visited, searches that they have shared and other online behaviours.
Computer virus	A piece of code which can copy itself and typically has a damaging effect on the device, such as corrupting the system or destroying data.	To understand that information put online leaves a digital footprint or trail and that this can aid identity theft.	
Cookies	A small amount of data generated by a website and saved by a web browser. Its purpose is to remember the information about the user	To identify the risks and benefits of installing software including apps.	What is SPAM? SPAM messages are emails or online messages sent from a computer to many other users. The users are sent the email without requesting it. The purpose of SPAM is for advertising, phishing or malware.
Digital footprint	The information about a person that exists on the internet as a result of their online activity.	To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism.	
Email	Messages sent by electronic means from one device to one or more people.	To identify appropriate behavior when participating or contributing to collaborative online projects for learning.	
Identity theft	When a person pretends to be someone else .	To identify the positive and negative influences of technology on health and the environment.	What is meant by plagiarism? Plagiarism refers to using someone else's work and claiming it to be your own.
Malware	Software that is specifically designed to disrupt, damage, or gain unauthorized access to a computer system.	To understand the importance of balancing game and screen time with other parts of their lives.	
Phishing	Practice of sending email pretending to be from reputable companies to persuade individuals to reveal personal information, such as passwords and credit card numbers.		
Plagiarism	When you use someone else's words or ideas and pass them off as your own		
Spam	Messages sent over the Internet, typically to many users, for the purposes of advertising, phishing or spreading malware.		

SCHOOL READY, WORK READY, LIFE READY

Knowledge Mat – Coding

Subject Specific Vocabulary				Sticky Knowledge
Output	Information that comes out of the computer, eg. sound	**Event**	Something that causes a block of code to be run	To use selection in coding with the If / else command.
Algorithm	A precise step by step set of instructions used to solve a problem or achieve an objective.	**Repeat**	This command can be used to make a block of commands run a set number of times or forever.	To understand and use variables in "2Code.
Bug	A problem in a computer program that stops it working the way it was designed.	**Input**	Information going into the computer. Can include moving or clicking the mouse, using the keyboard, swiping or tiling a device.	To use flowcharts for design of algorithms including selection
Variable	A named area in computer memory. A variable has a name and a value. The program can change this variable value.	**Action**	Types of commands, which are run on an object. They could be used to move an object or change a property.	To use the 'repeat until' with variables to determine the repeat.
Alert	This is a type of output. It shows a pop-up of text on the screen.	**Object**	An element in a computer program that can be changed using actions or properties. In2Code, buttons, characters and vehicles and types of objects.	To learn about and use computational thinking terms; decomposition and abstraction.
Code Design	Design what your program will look like and what it will do.	**If / Else**	A conditional command. This tests a statement. If the condition is true, then the commands inside the 'if block' will be run, If the condition is not met, then the commands inside the 'else block' are run.	
Command	A single instruction in a computer program.	**If**	A conditional command. This tests a statement. If the condition is true, then the commands inside the block will be run.	
Get input	This puts the text that a user types into the computer's temporary memory to be used to control the program flow.	**Simulation**	A model that represents a real or imaginary situation.	
Debug / Debugging	Looking for any problems in the code, fixing and testing them.	**Selection**	This is a conditional/ design command. When selection is used, a program will choose a different.	
Design Mode	Used to create the look of a 2Code computer program when it is run.	**Timer**	Use this command to run a block of commands after a timed delay or at regular intervals.	

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Key Questions		
Explain the stages of the design, code, test, debug coding process. This is a process to go through as you create a program using coding -Design: create a design which could be a flowchart, a labelled diagram or a storyboard. This helps to think through the algorithms required. -Code: code the algorithms used in and adapting the design. -Test and debug :see if the program works and fix any errors.	What do the terms decomposition and abstraction mean? Use examples to explain them. Decomposition is breaking a task into its component parts so that each part can be coded separately. If you were coding a game of chess, you could decompose into the move of the different pieces and the setup of the playing pieces. Abstraction is removing the unnecessary details to get the program functioning. In the example, the colour and size of the squares is not important to the game play	How can variables and if/else statements be useful when coding programs with selection? The variable could be set either to 0 or 1 and this could be changed by user action or a timer. If/else statement outcomes could depend upon the value of the variable, command for selection.