Knowledge Mat – Online Safety

Subject Specific Vocabulary		Sticky Knowledge	Key questions
Online safety	Refers to staying safe when having a presence online.	To gain a greater understanding of the impact that sharing digital content can have.	Who do I tell if I see anything online that makes me upset or scared? When you are at school, you should tell the teacher or another adult. At home, you should tell your parent or guardian or another adult that you trust.
Smart rules	A set of rules based around the word SMART designed to help you stay safe when online.	To review sources of support when using technology and children's responsibility to one another in their online behavior.	
Password	A string of characters that allows access to a computer system or service.	To know how to maintain secure passwords.	Why are passwords so important? Passwords protect your information and stop other people accessing it. Passwords are like a toothbrush; they should not be shared with anyone else.
Reputable	Having a good reputation.	To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this.	
Encryption	The process of converting information or data into a code, especially to prevent unauthorized access.	To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online.	Why is it important to reference sources in my work? If you use a book or article written by someone else, then you must reference it, so people know where you got the information from. If you don't do this then it is know as plagiarism.
Identity theft	The practice of using another person's name and personal information in order to obtain credit, loans, etc	To learn about how to reference sources in their work.	
Shared image	A picture that is shared online for other people to see.	To search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information.	
Citations	A quotation from or reference to a book, paper, or author, especially in an academic work.	Ensuring reliability through using different methods of communication.	**S** – stay SAFE online **M** – never MEET a stranger **A** – know who to ACCEPT and why **R** – know who is RELIABLE **T** – who to TELL
Plagiarism	The practice of taking someone else's work or ideas and passing them off as ones own.	**Children need to understand and follow the SMART rules**	
Reference	A mention of a source of information in a book or article including online.		
Bibliography	A list of all the books and articles used in a piece of work.		

SCHOOL READY, WORK READY, LIFE READY

Knowledge Mat – Coding

Subject Specific Vocabulary					
Output	Information that comes out of the computer, eg. sound	**Control**	These commands determine whether parts of the program will run, how often and sometimes, when.	**Event**	Something that causes a block of code to be run
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.	**Command**	A single instruction in a computer program.
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.	S – stay SAFE online M – never MEET a stranger A – know who to ACCEPT and why R – know who is RELIABLE T – who to TELL	
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.		
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.	**Sticky Knowledge**	
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.	To represent a program design and algorithm	
Sequence	This is when a computer program runs commands in order. In 2Code this can also include 'repeat' or a timer.	**If**	A conditional command. This tests a statement. If the condition is true, then the commands inside the block will be run.	To create a program that stimulates a physical system using decomposition.	
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.	To explore string and text variable types so that the most appropriate can be used in programs.	
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.	To use Launch command in 2Code Gorilla	
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.	To program a playable game with timers and scorepad.	

SCHOOL READY, WORK READY, LIFE READY

Key Questions		
What does simulating a physical system mean? Creating a program where the objects behave as they would in the real world. For example, a football program uses angles, speed and friction to stimulate kicking a football. When stimulating a physical system, you must break the system down into parts that can be coded (decomposition). The different parts will come together to make the full simulation.	Describe how you would use variables to make a timer countdown and a scorepad game. **Timer countdown**: create a timer variable and set it to the starting number of seconds. Add a Timer command that repeats and subtracts 1 every second. Add a text object in design view to display this number. **Score :** create a variable to store the score, each time the user gains a point, change and display the value of the variable.	Give examples of how you could use the Launch command in 2Code? Clicking on a button or other object in the program opens another 2Code program or a webpage.