Luckington Community School
Skills and Knowledge Progression
Computing

Intent: to ensure that all children have the skills to use technology creatively and safely.

	Computer Science				Information Technology		Digital Literacy	
	Problem Solving	**Programming**	**Logical Thinking**	**Wider Understanding**	**Creating Content**	***Searching***	**E-safety**	**Using IT beyond school**
R	I can use simple directional language to give directions.	I can explore the command buttons on BeeBot.	I can predict what might happen when I press a button on Beebot.		I can create pictures, text and photos using technology.	I can search for information with an adult or older pupil.	I can keep my login information safe. I can tell a trusted adult if something worries me when using technology.	I recognise different types of technology at home and at school.
1	I can explain that an algorithm is a set of instructions. (1.4 1.5) I know that a computer program turns an algorithm into code that the computer can understand. (1.4 1.7)	I can work out what is wrong when the steps are out of order in instructions. (1.4 1.5) I can say that if something does not work how it should, it is because my code is incorrect. (1.7) I can try and fix my code if it isn't working properly. (1.7)	I can make good guesses of what is going to happen in a program for example where the turtle might go. (1.5 1.7)		I can sort sound, pictures and text. (1.2) I can add sound, pictures and text to a program such as 2 create a story. (1.6) I can change content on a file such as text, sound and images. (1.3, 1.6, 1.7 1.8) I can name my work. (1.2, 1.3, 1.6, 1.7, 1.8) I can save my work. (1.2, 1.3, 1.6, 1.7, 1.8) I can find my work. (1.2, 1.3, 1.6, 1.7, 1.8)	I can find data using specific searches – for example, using 2Investigate. (2.4, 2.5)	I can keep my login information safe. (1.1 and most units) I can save my work in a safe place such as 'My Work' folder. (1.1 and most units)	I can say what technology is. (1.9) I can say what examples of technology are in school. (1.9) I can say what examples of technology are at home. (1.9) I know that a chair uses old technology and a smart phone uses new technology. (1.9)

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2	I can explain an algorithm is a set of instructions to complete a task. (2.1)	I know I need to carefully plan my algorithm so it will work when I make it into code. (2.1) I can design a simple program using 2Code that achieves a purpose. (2.1) I can find and correct some errors in my program. (2.1)	I can say what will happen in a program. (2.1) I can spot something in a program that has an action or effect (does something). (2.1)		I can organise data – for example, using a database such as 2Investigate. (2.3, 2.4) I can use several programs to organise information – for example, using binary trees such as 2Question or spreadsheets such as 2Calculate. (2.4, 2.8) I can edit digital data such as data in music composition	I can find data using specific searches – for example, using 2Investigate. (2.4, 2.5) I can find information I need using a search engine. (2.5)	I know the consequences of not searching online safely. (2.2, 2.5) I can report unkind behaviour and things that upset me online, to a trusted adult. (2.2)	I can see where technology is used at school such as in the office or canteen. (2.2) I 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) I can share work and communicate electronically – for example using 2Email or the display boards. (2.2 and others)

					software like 2Sequence. (2.7 and most units) I can name, save and find my work. (2.3, 2.4, 2.6, 2.7, 2.8 & most units) I can include photos, text and sound in my creations. (2.8, 2.6)			
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3	I can make a real-life situation into an algorithm for a program. (3.1)	I can design an algorithm carefully, thinking about what I want it to do and how I can turn it into code. (3.1) I can identify an error in my program and fix it. (3.1) I can experiment with timers in my programs. (3.1) I can identify the difference in using between the effect of a timer or repeat command in my code. (3.1) I know that a variable stores information while a program is running (executing). (3.1)	I can identify 'If' statements, repetition and variables. (3.1) I can read programs with several steps and predict what it will do. (3.1)	I can identify different ways that the internet can be used for communication. (3.5) I can use email such as 2Email to respond to others appropriately and attach files. (3.5)	I can collect data and input it into software. (3.3, 3.6, 3.8) I can analyse data using features within software to help such as, formula in 2Calculate (spreadsheets). (3.3, 3.6, 3.8) I can present data and information using different software such as 2Question (branching database) or 2Graph (graphing tool). (3.3, 3.6, 3.8,3.9) I can consider what the most appropriate software to use when given a task by my teacher. (Across units) I can create purposeful (appropriate) content and attach this to emails. (3.3, 3.5, 3.6, 3.7, 3.8, 3.9)	I can carry out searches to find digital content on a range of online systems, such as within Purple Mash or on an internet search engine. (Across units)	I can create a secure password. (3.2) I can explain the importance of having a secure password and not sharing it with others. (3.2, 3.5) I can explain the negative consequences of not keeping passwords safe and secure. (3.2, 3.5) I understand the importance of keeping safe online and behaving respectfully. (3.2) I can use communication tools such as 2Email respectfully and use good etiquette. (3.2, 3.5) I can report unacceptable content and contact online in more than one way to a trusted adult. (3.2) *NL, JV, AH, LB, AB, CM, JMS, JO PM*	
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4	I can turn a real-life situation to solve into an algorithm, using a design that shows how I can accomplish this in code. (4.1, 4.5)	I can use repetition in my code. For example, using a loop that continues until a condition is met such as the correct answer being entered. (4.1) I can use timers within my program designs more accurately to create repetition effects. For example, I can create a counting machine. (4.1) I can use selection (decision) in my programming. For example, using an 'if statement' for a	I can read programs that contain several steps and predict the outcomes with increasing accuracy. (4.1, 4.5)	I recognise the main component parts of hardware which allow computers to join and form a network. (4.8) I understand that network and communication components can be found in many different devices which allow them to join the internet. (4.2, 4.7, 4.8)	I can create and improve my solutions to a problem based on feedback. For example, create a program using 2Code. (4.1, 4.2) I can review solutions that others have created, using a checklist of criteria. (4.1, 4.2) I can work collaboratively to create content and solutions. (4.1, 4.3, 4.4,48)	I understand the purpose of a search engine and the main features within it. (4.7) I can look at information on a webpage and make predictions about the accuracy of information contained within it. (4.7)	I have a good understanding of the online safety rules we learn at school. (4.2 & across curriculum) I can demonstrate how to use different online technologies safely. (4.2 & across curriculum) I can demonstrate how to use a few different online services safely. (4.2 & across curriculum) I know I have a right to privacy both on and offline. (4.2 & across curriculum)	

		question being asked and the program takes one of two paths. (4.1) I can use variables within my program and know how to change the value of variables. (4.1) I can use the user inputs and output features within my program, such as 'Print to screen'. (4.1) I can identify errors in my code by using different methods, such as steeping through lines of code and fixing them. (4.1)			I can share digital content using a variety of applications such as: 2Blog, 2Email and Display Boards. (Across units		I recognise that my wellbeing can be affected by how I use technology. (4.2 & across curriculum) I can report with ease any concerns with content and contact online and know immediate strategies to keep safe. (4.2 & across curriculum) Completed during digital footprint workshop.	
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5	I can make more complex real-life problems into algorithms for a program. (5.1)	I can test and debug my programs as I work. (5.1, 5.5) I can convert (translate) algorithms that contain sequence, selection and repetition into code that works. (5.1) I can use sequence, selection, repetition, and some other coding structures in my code. (5.1) I can organise my code carefully for example, naming variables and using tabs. I know this will help me debug more efficiently. (5.1) I can use logical methods to identify the cause of any bug with support to identify the specific line of code. (5.1)		I know the importance of computer networks and how they help solve problems and enhance communication. (5.2) I recognise the main dangers that can be perpetuated via computer networks. (5.2) I can explain what personal information is and know strategies for keeping this safe. (5.2) I can use the most appropriate form of online communication according to the digital content. For example, use 2Email, 2Blog and Display Boards. (5.2 & others)	I can make appropriate improvements to digital work I have created. (Across units) I can comment on how successful a digital solution is that I have created. For example, a program built in 2Code that sorts decimals numbers. (Across units) I can work collaboratively with others creating solutions to problems using appropriate software such as 2Code. (Across units) I can use collaborative modes such as within 2Connect to work with others and share it. (5.7)	I can search precisely when using a search engine. For example, I know I can add additional words or removes words to help find better results. (5.2) I can explain in detail how accurate, safe and reliable the content is on a webpage. (5.2)	I have a secure knowledge of online safety rules taught at school. (5.2 & across units) I can demonstrate the safe and respectful use of different online technologies and online services. (5.2 & across units) I always relate appropriate online behaviour to my right to have personal privacy. (5.2 & across units) I know how to not let my mental wellbeing or others be affected by use of online technologies and services. (5.2 & across units)	
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6	I can turn a complex programming task into an algorithm. (6.1)	I can test and debug my program as I work on it and use logical methods to identify a cause of a bug. (6.1)	I can interpret (understand) a program in parts and can make logical attempts to put the separate parts together in an	I can explain the difference between the internet and the World Wide Web. (6.2, 6.4,6.6)	I can consider the intended audience carefully when I design and make digital content. (6.1, 6.3, 6.4, 6.5, 6.7,6.9)	I can use filters when searching for digital content. (6.2,6.9) I can explain in detail how accurate and reliable a	I can demonstrate safe and respectful use of a range of different technologies and online services. (6.2, 6.4) I can identify more discrete inappropriate behaviours online. For	

	I can identify the important aspects of a programming task (abstraction). (6.1) I can decompose important aspects of a programming task in a logical way, identifying appropriate coding structures that would work. (6.1)	I can identify a specific line of code that is causing a problem in my program and attempt a fix. (6.1) I can translate algorithms that include sequence, selection and repetition into code and nest these structures within each other. (6.1) I can use inputs and outputs within my coded programs such as sound, movement and buttons and represent the state of an object (6.1, 6.7)	algorithm to explain the program as a whole. (6.1)	I can explain what a WAN and LAN is and describe the process of how access to the internet in school is possible. (6.2,6.6)	I can design and create my own online blogs. (6.4) I can use criteria to evaluate the quality of my own and others digital solutions, suggesting refinements. (6.1, 6.3, 6.4, 6.5, 6.7,6.9)	webpage and its content is. (6.2) I can compare a range of digital content sources and rate them in terms of content quality and accuracy. (6.1, 6.3, 6.4, 6.5, 6.7,6.9)	example, someone who may be trying to groom me or someone else. (6.2) I can use critical thinking to help me stay safe online. (6.2) I know the value of protecting my privacy and others online. (6.2, 6.4)	