



## Computing

Skills Progression– November '21 developed from STEM learning

	e-Safety* (DL)	Programming (CS)	Handling Data (IT)	Multimedia (IT)	Technology in our Lives (DL)
<b>Early Years (Reception)</b>	<p>1.a Know that I should have a trusted adult to speak to if I have any worries about being online</p> <p>1.b Know that should ask a trusted adult before going online</p>	<p>2.a Complete a simple program on a computer</p> <p>2.b Use technological tools to move in various directions</p>	<p>3.a Use ICT to record a special event</p> <p>3.b Know that ICT can be used to record things that we have found out</p>	<p>4.a Use a range of technological tools</p> <p>4.b Use on/off switches and operate simple equipment including apps on tablets</p>	<p>5.a Use a range of technological tools</p> <p>5.b Talk about different types of technology in my home and life</p>
<b>End of Key Stage 1 (Year 2)</b>	<p>1.1 Explain why I need to keep my password and personal information private.</p> <p>1.2 Describe the things that happen online that I must tell an adult about.</p> <p>1.3 Talk about why it is important to be kind and polite online and in real life.</p> <p>1.4 Know that not everyone is who they say they are on the Internet.</p>	<p>2.1 Give instructions to my friend (using forward, backward and turn) and physically follow their instructions.</p> <p>2.2 Tell you the order I need to do things to make something happen and talk about this as an algorithm.</p> <p>2.3 Program a robot or software to do a particular task.</p> <p>2.4 Watch a program execute and spot where it goes wrong so that I can debug it.</p>	<p>3.1 Talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder.</p> <p>3.2 Make and save a chart or graph using the data I collect.</p> <p>3.3 Talk about the data that is shown in my chart or graph.</p> <p>3.4 Start to understand a branching database.</p> <p>3.5 Say what kind of information I could use to help me investigate a question.</p>	<p>4.1 Use technology to organise and present my ideas in different ways.</p> <p>4.2 Use the keyboard on my device to add, delete and space text for others to read.</p> <p>4.3 Use an online tool that will help me to share my ideas with other people.</p> <p>4.4 Save and open files on the device I use.</p>	<p>5.1 Say why I use technology in the classroom and in my home and community.</p> <p>5.2 Identify benefits of using technology including finding information, creating and communicating.</p> <p>5.3 Talk about the differences between the Internet and things in the physical world.</p>
<b>End of Lower key Stage 2 (Year 4)</b>	<p>1.5 Choose a secure password when I am using a website.</p> <p>1.6 Talk about the ways I can protect myself and my friends from harm online.</p> <p>1.7 Use the safety features of websites as well as reporting concerns to an adult.</p> <p>1.8 Know that anything I post online can be seen by others.</p> <p>1.9 Choose websites and games that are appropriate for my age.</p> <p>1.10 Talk about why I need to ask a trusted adult before downloading files and games from the Internet.</p> <p>1.11 Comment positively and respectfully online.</p>	<p>2.5 Use logical thinking to solve an open-ended problem by breaking it up into smaller parts.</p> <p>2.6 Use an efficient procedure to simplify a program.</p> <p>2.7 Use a sensor to detect a change which can select an action within my program.</p> <p>2.8 Know that I need to keep testing my program while I am putting it together.</p> <p>2.9 Recognise an error in a program and debug it.</p>	<p>3.6 Organise data in different ways.</p> <p>3.7 Collect data and identify where it could be inaccurate.</p> <p>3.8 Plan, create and search a database to answer questions.</p> <p>3.9 Choose the best way to present data to my friends.</p> <p>3.10 Use a data logger to record and share my readings with my friends.</p>	<p>4.5 Use photos, video and sound to create an atmosphere when presenting to different audiences.</p> <p>4.6 Change the appearance of text to increase its effectiveness.</p> <p>4.7 Create, modify and present documents for a particular purpose.</p> <p>4.8 Use a keyboard confidently and make use of a spellchecker to write and review my work.</p> <p>4.9 Use an appropriate tool to share my work and collaborate.</p>	<p>5.4 Identify key words to use when searching safely on the World Wide Web.</p> <p>5.5 Think about the reliability of information I read on the World Wide Web.</p> <p>5.6 Tell you how to check who owns photos, text and clipart.</p> <p>5.7 Create a hyperlink to a resource on the World Wide Web.</p>
<b>When we leave the school. Year 6</b>	<p>1.12 Protect my password and other personal information.</p> <p>1.13 Explain the consequences of sharing too much about myself online.</p> <p>1.14 Explain the consequences of spending too much time online or on a game.</p> <p>1.15 Explain the consequences to myself and others of not communicating kindly and respectfully.</p>	<p>2.10 Deconstruct a problem into smaller steps, recognising similarities to solutions used before.</p> <p>2.11 Explain and program each of the steps in my algorithm.</p> <p>2.12 Evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm.</p> <p>2.13 Recognise when I need to use a variable to achieve a required output.</p> <p>2.14 Use different inputs (including sensors) to control a device or onscreen action and predict what will happen.</p> <p>2.15 Use logical reasoning to detect and correct errors in algorithms and programs.</p>	<p>3.11 Plan the process needed to investigate the world around me.</p> <p>3.12 Select the most effective tool to collect data for my investigation.</p> <p>3.13 Check the data I collect for accuracy and plausibility.</p> <p>3.14 Interpret the data I collect.</p> <p>3.15 Present the data I collect in an appropriate way.</p> <p>3.16 Use the skills I have developed to interrogate a database.</p>	<p>4.10 Talk about audience, atmosphere and structure when planning a particular outcome.</p> <p>4.11 Combine a range of media, recognising the contribution of each to achieve a particular outcome.</p> <p>4.12 Explain why I select a particular online tool for a specific purpose.</p>	<p>5.8 Tell you the Internet services I need to use for different purposes.</p> <p>5.9 Describe how information is transported on the Internet.</p> <p>5.10 Select an appropriate tool to communicate and collaborate online.</p> <p>5.11 Talk about the way search results are selected and ranked.</p> <p>5.12 Check the reliability of a website.</p> <p>5.13 Tell you about copyright and acknowledge the sources of information that I find online.</p>

**Key subject specific vocabulary** (Tier 3 vocab) to be embedded and revisited during the study of computing at Little Melton: algorithm, sequence, input, output, debug, data, store, organise, logic, manipulate, retrieve, digital, repetition, variables, networks, blog, post, publish, forum, hyperlink, embedded video, control, software, hardware, simulation, search, worldwide web, database, privacy, browser, copy, paste, function keys, accessibility, keyboard, mouse, cloud, multimedia, social media, blocking, permissions

### We believe these skills are important for life because:

- We want children to have confidence and flexibility to use existing and future digital technologies successfully. (IT)
- We want children to develop a logical approach to creating content and problem solving that can be applied to real life situations (CS)
- We want children to embrace new technologies but to also have a keen appreciation of e-safety, data security and the impact of their digital footprint so that they can use digital devices in a responsible manner now and in their futures. (DL) (\*also reinforced in PSHE