



## Rowsley Church of England Primary School

### Computing Progression and Long Term Plan (updated May 2025)

*"An intelligent heart acquires knowledge, and the ear of the wise seeks knowledge" Proverbs 18:15*

*"Life in all its fullness." John 10:10*

#### **Intent**

Our computing curriculum aims to equip children both with the skills they need to produce digital output today and the confidence and understanding to prepare them for the inevitable digital advances of the future. We aim to ensure all children understand the principles information and computation through our Computer Science units and that they can build on this in our Information Technology units to create programs, systems and a range of content. Additionally, we want our children to become digitally literate so that they can express themselves through ICT and stay safe online. Our use of ICT is embedded across our creative curriculum, to ensure children understand the way in which it can be used to support and further learning in any subject.

#### **Implementation**

We are lucky at Rowsley to have access to a range of technology to support our learning in Computing. Children cover a range of units on an annual basis, encompassing Computer Science, Information Technology and Digital Literacy. The units follow the attainment targets of the National Curriculum 2014 and are written to ensure progression year-on year. Teaching involves both hands-on and unplugged lessons to ensure children have both practical and theoretical knowledge. Vocabulary is continually built-on and frequently revisited to ensure children are able to express their ideas accurately.

#### **Impact**

Teachers regularly assess children's capability and understanding through observations and looking at completed work. Some units contain a 'challenge' lesson at the end in which children independently apply the skills they have learned, whilst others have written assessments. The key knowledge identified for each unit forms the basis of teacher assessments.

## Statutory Requirements: EYFS and National Curriculum

| EYFS  | KS1  | KS2   |
|---|--|---|
| <p>Know and talk about the different factors that support their overall health and wellbeing...sensible amounts of 'screen time'.</p> <p>Explore, use and refine a variety of artistic effects to express their ideas and feelings.</p> <p>Be confident to try new activities and show independence, resilience and perseverance in the face of a challenge.</p> <p>Explain the reasons for rules, know right from wrong and try to behave accordingly.</p> | <p>Pupils should be taught to:</p> <p>Co2/1.1 Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Co2/1.2 Create and debug simple programs.</p> <p>Co2/1.3 Use logical reasoning to predict the behaviour of simple programs.</p> <p>Co2/1.4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>Co2/1.5 Recognise common uses of information technology beyond school.</p> <p>Co2/1.6 Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies.</p> | <p>Pupils should be taught to:</p> <p>Co2/1.1 Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Co2/1.2 Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</p> <p>Co2/1.3 Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> <p>Co2/1.4 Understand computer networks including the internet; how they can provide multiple services, such as the world-wide web and the opportunities they offer for communication and collaboration.</p> <p>Co2/1.5 Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>Co2/1.6 Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Co2/1.7 Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p> |

## Overview of Computing Topics

### Cycle 1

|      | Autumn 1      | Autumn 2                   | Spring 1                                  | Spring 2                               | Summer 1                   | Summer 2              |
|------|---------------|----------------------------|---|--|----------------------------|-----------------------|
| Y1/2 | Online Safety | Beebots (Y1)<br>2Logo (Y2) | -   | Using the Internet                     | Word Processing            | Presentation Software |
| Y3/4 | Online Safety | Coding                     | Online searching<br>Presentation Software | -                                      | Hardware Investigators     | Graphing              |
| Y5/6 | Online Safety | 3D Modelling               | Blogging (Purple Mash)                    | Game Making<br>(Scratch & Purple Mash) | Strategic Online Searching | -                     |

### Cycle 2

|      | Autumn 1      | Autumn 2                                   | Spring 1                                    | Spring 2     | Summer 1              | Summer 2             |
|------|---------------|--|---|--------------|-----------------------|----------------------|
| Y1/2 | Online Safety | Beebots (Y1)<br>2Logo (Y2)                 | Technology Around Us                        | Spreadsheets | Presentation Software | Animated Story Books |
| Y3/4 | Online Safety | Online searching<br>Word – word processing | Coding                                      | -            | Spreadsheets          | Computer networks    |
| Y5/6 | Online Safety | Presentation Software                      | Computer networks &<br>Understanding Binary | --           | Spreadsheets          | Programming          |

Colours refer to the areas of the curriculum detailed in the 'Skills and Knowledge Progression' on pages 4-10

Digital Literacy Computer Science Information Technology

## Skills and Knowledge Progression

| Y1/2  | Y3/4  | Y5/6  |
|---|---|---|
| <b>Computer Science</b>   |   |   |
| <p><b>Using the Internet (Twinkl Y2)</b></p> <ul style="list-style-type: none"> <li>✓ To know that the internet can be used to share information (words, pictures, videos) with people around the world.</li> <li>✓ To know that we can use a search engine to find out information about specific things.</li> <li>✓ To be able to take a photograph on a tablet and know the image is stored on that device, but that it can then be shared online.</li> <li>✓ To know why it is important to think about what words and pictures we share online.</li> </ul> <p>LO: I can use one word to complete an internet search using a search engine.</p> <p>LO: I can use a search engine to find results suitable for children. I can explain what I would do if search results made me feel unhappy.</p> <p>LO: I can follow a link to a new webpage.</p> <p>LO: I can take and store photos on a digital device to use in a blog.</p> <p>LO: I can safely and sensibly publish photos and text in a blog.</p> <p>LO: I can post positive comments on someone else's blog and explain why we must be careful what we say online.</p> <p><b>internet, online, website/webpage, search, search results, information, publish, blog</b></p> | <p><b>Networks (See individual LOs for resource origin)</b></p> <ul style="list-style-type: none"> <li>✓ To know that the internet is a network of connected computers.</li> <li>✓ To explain some uses of the internet in modern life.</li> <li>✓ To know what an email is and that an internet connection is needed to send one.</li> <li>✓ To be able to send an attachment and link via email.</li> </ul> <p>LO: I can explain what the internet is and how it is used around the world. (Twinkl Online Searchers &amp; Surfers lesson 1)</p> <p>LO: I can explain how the internet works. (Twinkl Online Searchers &amp; Surfers lesson 2)</p> <p>LO: I can explain what emails are and why they are used. (Twinkl Communication and Collaboration)</p> <p>LO: I can explain how emails are sent and received. (Twinkl Communication and Collaboration)</p> <p>LO: I can send an email with an attachment and containing a link.</p> <p><b>connected, router, email, receive, attachment, link, cable, wireless, internet service provider, web server, internet, World Wide Web</b></p> | <p><b>Networks and Understanding Binary (PM 6.6 and 6.8)</b></p> <ul style="list-style-type: none"> <li>✓ To understand LAN and WAN as networks that connect computers.</li> <li>✓ To explain some ways in which AI is having a positive and negative impact on people's lives.</li> <li>✓ To understand binary as a way computers process and store information.</li> <li>✓ To be able to use simple binary.</li> </ul> <p>LO: I can explain what a LAN and WAN are and give examples of where each would be used.</p> <p>LO: I can consider how the internet has created changes in my lifetime and think about what changes there could be in future. <i>Particularly in regards to AI.</i></p> <p>LO: I can explain that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s.</p> <p>LO: I can represent different whole numbers in binary.</p> <p>LO: I can use binary in the context of a computer game to describe an object's state.</p> <p><b>Local Area Network, Wide Area Network, Artificial Intelligence, binary, code, pattern, code, Base 10, Base 2, microchip</b></p> |
| <p><b>Beebots (Y1 only)</b></p> <ul style="list-style-type: none"> <li>✓ To understand Beebots move by following a set of instructions.</li> <li>✓ To be able to program a Beebot to make it move in a predictable way.</li> <li>✓ To be able to debug errors in a Beebot's algorithm.</li> </ul> <p>LO: I can create a set of instructions using pictures.</p> <p>LO: I can explain why it is important to be precise when writing an algorithm.</p>   | <p><b>Coding – Sequence &amp; Selection (Scratch – SH planning)</b></p> <ul style="list-style-type: none"> <li>✓ To understand that the <i>if...else</i> function in a block coding program is an example of selection.</li> <li>✓ To explain why the sequencing of commands is important.</li> <li>✓ To use sequence and selection in a simple piece of block doing.</li> <li>✓ To debug sequence and selection errors in a code.</li> </ul> <p>LO: I can explain <i>if...else</i> selection.</p>  | <p><b>Coding (PM 5.1)</b></p> <ul style="list-style-type: none"> <li>✓ To use sequence, selection and repetition within an efficiently written code to achieve a specific goal.</li> <li>✓ To be able to use variables within a code.</li> <li>✓ To be able to create and use strings in a code.</li> <li>✓ To explain the terms decomposition and abstraction.</li> </ul> <p>LO: I can create a simple playable games, using variables within a code.</p> <p>LO: I can program a simulation.</p>   |

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| <p>LO: I can write instructions to program a person like a computer.</p> <p>LO: I can program a Beebot so it moves as I want it to.</p> <p>LO: I can debug errors in a Beebot's algorithm.</p> <p><b>instructions, algorithm, order, debug, program</b></p>   | <p><i>Unplugged lesson. See examples Y4 Twinkl quiz lesson. Ch'n explain Scratch examples.</i></p> <p>LO: I can use <i>if</i> to make an action happen when a condition is met. e.g. <i>Sprite moving</i></p> <p>LO: I can use <i>if...else</i> selection to write a 3 question quiz with support.</p> <p>LO: I can debug a quiz code that uses <i>if...else</i></p> <p>LO: I can design and write my own quiz using <i>if...else</i>.</p> <p><b>coding, block coding, sequencing, command, selection</b></p>   | <p>LO: I can break down a task into small steps, understanding the concepts of decomposition and abstraction.</p> <p>LO: I can use functions within a code to make it more efficient.</p> <p>LO: I can use effectively use variables and strings within a code.</p> <p><b>sequence, selection, repetition, variable, simulation, decomposition, abstraction, string.</b></p>  |
| <p><b>2Logo (PM 2.1) (Y2 only)</b></p> <ul style="list-style-type: none"> <li>✓ To understand an algorithm as a set of instructions.</li> <li>✓ To create a simple algorithm using sequencing.</li> <li>✓ To know what debugging is and why it is necessary.</li> <li>✓ To debug a simple code.</li> </ul> <p>LO: I can explain what an algorithm is and create a simple computer program using one.</p> <p>LO: I can create a program using a given design.</p> <p>LO: I can create an algorithm that follows a timed sequence.</p> <p>LO: I can understand what different events do in a code.</p> <p>LO: I can carry out simple debugging and explain why it is important to debug repeatedly.</p> <p><b>algorithm, order, debug, program, precise</b></p> | <p><b>Coding – Sequence &amp; Repetition (Scratch – SH planning)</b></p> <ul style="list-style-type: none"> <li>✓ To explain what repetition is in the context of block coding.</li> <li>✓ To use a repetition function within a block coding program to make a code more efficient.</li> <li>✓ To debug sequence and repetition errors within a code.</li> </ul> <p>LO: I can use sequencing to write an algorithm to draw a shape.</p> <p>LO: I can use repetition to make my algorithm more effective.</p> <p>LO: I can use repetition within a block coding program to write efficient code.</p> <p>LO: I can practise using repetition to write efficient code.</p> <p>LO: I can find and fix Sequence and Repetition errors in a code.</p> <p>LO: I can use a Repeat Until loop to repeat an action until a condition is met.</p> <p><b>instructions, algorithm, sequencing, command, repeat, repetition, action, efficient</b></p> | <p><b>Game Creator (PM 5.5)</b></p> <ul style="list-style-type: none"> <li>✓ To consider the intended audience for and purpose of my code.</li> <li>✓ To use sequence, selection and repetition to write a code for a given purpose.</li> <li>✓ To be able to insert images and audio into a code.</li> <li>✓ To peer review a code, suggesting improvements or finding errors.</li> </ul> <p>LO: I can consider the elements that make a successful game in order to design a successful game myself.</p> <p>LO: I can upload images and insert them into my game to fit a theme.</p> <p>LO: I can upload sounds and insert them into my game at appropriate points.</p> <p>LO: I can play and peer review a friend's game, giving suggestions for how they could improve their game.</p> <p><b>upload, insert, review, refine</b></p> |
| <p><b>Technology around us (Twinkl Y2)</b></p> <ul style="list-style-type: none"> <li>✓ To be able to give example of different types of technology and what they are used for.</li> <li>✓ To explain which digital devices can be connected to the internet or each other (e.g. playing music on a speaker wirelessly from your phone)</li> <li>✓ To explain some ways technology can help us at home, school and work.</li> </ul> <p>LO: I can recognise different technology in my school and talk about how it is used.</p>   | <p><b>Hardware Investigators (PM 4.8)</b></p> <ul style="list-style-type: none"> <li>✓ To explain the difference between hardware and software, giving examples.</li> <li>✓ To describe computer hardware using accurate vocabulary.</li> <li>✓ To explain some of the functions of a desktop computer's hardware.</li> </ul> <p>LO: I can explain the difference between hardware and software (Twinkl PPT)</p>  |   |

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| <p>LO: I can recognise different technology in my home and talk about how it is used.</p> <p>LO: I can explain why we link digital devices in networks and give examples of this.</p> <p>LO: I can explain how IT has changed over time and how this has helped us.</p> <p><b>technology, Information Technology, digital device, advantage, disadvantage</b></p> | <p>LO: I can name and explain the functions of the different parts of a desktop computer.</p> <p>LO: I can explain in more detail the functions of some parts of a desktop computer.</p> <p>LO: I can create a digital presentation to explain the parts of a desktop computer.</p> <p><b>hardware, software, peripheral, component, word processor, presentation software, monitor, keyboard, mouse, speaker, display, Random Access Memory (RAM), Central Processing Unit (CPU), graphics card, network card, hard disk drive.</b></p> |  |
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| <b>Information Technology</b> |
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| <p><b>Word processing</b></p> <ul style="list-style-type: none"> <li>✓ To be able to find letters on a QWERTY keyboard.</li> <li>✓ To know how to use the space bar, return key and shift key when typing.</li> <li>✓ To be able to use different fonts, colours and letter sizes when typing.</li> <li>✓ To use and understand the purpose of the undo and redo buttons.</li> </ul> <p>LO: I can use a keyboard to type a short piece of text then save my work.</p> <p>LO: I can use a keyboard to type different symbols.</p> <p>LO: I can change the colour, font and size of text when I am typing and use undo/redo buttons.</p> <p>LO: I can use on-screen buttons to make text bold, underlined or italicised.</p> <p><b>text, keyboard, space bar, return, shift, undo, redo, font, size, colour, type, bold, underline, italics, type</b></p> | <p><b>Word processing</b></p> <ul style="list-style-type: none"> <li>✓ To develop typing efficiency, keeping hands on the correct side of the keyboard, starting to use all fingers and using thumbs for the space bar.</li> <li>✓ To be able to save and then retrieve a word processed document.</li> <li>✓ To be able to highlight a specific word and change the colour/size/font.</li> <li>✓ To explain the purpose of short cut keys and use copy, paste and highlight all shortcuts with a prompt sheet.</li> </ul> <p>LO: I know where the letters are on a QWERTY keyboard and can keep my fingers on the home keys to type efficiently.</p> <p>LO: I can efficiently name, save and reopen a word processing document, and explain that it is saved to an intranet.</p> <p>LO: I can confidently edit text, including using keyboard shortcuts.</p> <p>LO: I can complete a Word Processing challenge. Challenge to demonstrate children can confidently use all of the above skills to produce text to a given specification.</p> <p><b>word processor, home row, efficient, save, open, edit, keyboard shortcut, highlight</b></p> | <p><b>Blogging (PM 6.4)</b></p> <ul style="list-style-type: none"> <li>✓ To type quickly, using all fingers.</li> <li>✓ To explain how the intended audience of a blog will effect the content it contains.</li> <li>✓ To publish work on a blog.</li> <li>✓ To explain potential issues with having a comments section and how these can be overcome.</li> </ul> <p>LO: I can develop my typing skills to type more quickly and efficiently. (Not a PM lesson)</p> <p>LO: I can plan the content of a blog.</p> <p>LO: I can present specific information in a blog, considering its visual appeal.</p> <p>LO: I can discuss the pros and cons of comments on a blog and relate this to other social media interactions.</p> <p><b>content, content creator, visuals, appealing, social media</b></p> |
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| <p><b>Presentation Software (in both cycles)</b></p> <p>Y1</p> <ul style="list-style-type: none"> <li>✓ To be able to name a presentation file.</li> <li>✓ To be able to open a saved file on a later occasion.</li> <li>✓ To be able to type into a text box.</li> <li>✓ To be able to insert shapes.</li> </ul> <p>Y2</p> <ul style="list-style-type: none"> <li>✓ To be able to insert a new text box and type into it.</li> </ul> | <p><b>Presentation Software</b></p> <ul style="list-style-type: none"> <li>✓ To be able to gather specific information using a search engine.</li> <li>✓ To be able to use Order and Text Wrap to layer text and images.</li> <li>✓ To explain why the audience is important when considering how to present information.</li> </ul> | <p><b>Presentation Software</b></p> <ul style="list-style-type: none"> <li>✓ To be able to insert audio into a presentation.</li> <li>✓ To be able to add animations to a presentation, allowing text to be displayed in a chosen order.</li> <li>✓ To understand the purpose of speaker notes and know how to insert these.</li> </ul> <p>LO: I can format and insert slides containing audio clips.</p> |
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| <ul style="list-style-type: none"> <li>✓ To be able to use different colours, fonts and text sizes.</li> <li>✓ To be able to insert shapes and images.</li> <li>✓ To be able to move and resize shapes and images to achieve a goal.</li> </ul> <p>LO: I can type on Slides and give my file a name. (Y1)<br/>LO: I can insert different text boxes on Slides and give my file a name. I can use Shift for capital letters. (Y2)</p> <p>LO: I can reopen a saved document and do more typing. (Y1)<br/>LO: I can edit the colour, font and size of my text. (Y2)</p> <p>LO: With support, I can use shapes to create a particular image. (Y1)<br/>LO: I can use shapes, resizing them when needed, to create a particular image (Y2).</p> <p>LO: I can use different brush tools to create a particular image.</p> <p>LO: I can insert a suitable picture (Y1).<br/>LO: I can combine text and pictures around a shared theme, moving them around the page (Y2).</p> <p><b>save, type, text box, edit, colour, font, size, resize, text, combine, insert</b></p> | <p>LO: We are using a search engine effectively to find interesting information to present.</p> <p>LO: We are combining text and images to present information. <i>Inserting images and text boxes then using layering, text wrap and grouping.</i></p> <p>LO: We are editing text to present information in an eye-catching and easy to follow format.</p> <p><b>search engine, layering, order, text wrap, text box, image, presentation software</b></p>  | <p>LO: I can use text boxes and Word Art to add interesting text to a presentation.</p> <p>LO: I can add animations to a presentation.</p> <p>LO: I can add speaker notes to a presentation and explain their purpose.</p> <p><b>animation, animation bar, speaker notes, sequence, audience, purpose, preview, slide</b></p>  |
| <p><b>Spreadsheets (PM 2.3)</b></p> <ul style="list-style-type: none"> <li>✓ To know rows go across and columns go down.</li> <li>✓ To insert data into cells.</li> <li>✓ To use a tool to automatically total rows/columns in a spreadsheet.</li> <li>✓ To know data in a spreadsheet can be converted into a chart or graph.</li> </ul> <p>LO: I can describe a row and column and enter data into different cells.</p> <p>LO: I can add clipart images to my spreadsheet and move them around.</p> <p>LO: I can use a totally tool to add information in cells together.</p> <p>LO: I can use the 'speak' and 'count' tools to help count up items in my spreadsheet.</p> <p>LO: I can convert my data in a bar chart.</p> <p><b>spreadsheet, row, column, cell, graph/chart, tools</b></p>   | <p><b>Spreadsheets (see topic plan)</b></p> <ul style="list-style-type: none"> <li>✓ To be able to use a data-logger to gather information.</li> <li>✓ To be able to input data in the correct cells for a given purpose.</li> <li>✓ To describe a cell using its cell name/reference.</li> <li>✓ To write simple formula, knowing they begin with = (e.g. =A1+B2).</li> </ul> <p>LO: I can use a data-logger to gather information about the conditions around school.</p> <p>LO: I can input data to create a spreadsheet and explain its purpose.</p> <p>LO: I can format cells for a specific purpose and use a simple formula to solve a problem.</p> <p>LO: I can use a spreadsheet to explore place value.</p> <p>LO: I can complete a spreadsheet challenge to demonstrate the skills I have learned.</p> <p><b>data, data logger, cell reference, input, format, formula, equals, solve</b></p> | <p><b>Spreadsheets (PM 6.9)</b></p> <ul style="list-style-type: none"> <li>✓ To explain the purpose of series fill.</li> <li>✓ To use formulae to add, subtract, multiply and divide cell values.</li> <li>✓ To give some examples of delimiters.</li> <li>✓ To convert spreadsheet data into a graph.</li> <li>✓ To know conditional formatting can help a spreadsheet be read more easily.</li> </ul> <p>LO: I can use a simple formula and the series fill function.</p> <p>LO: I can use formulae to carry out the four mathematical operations.</p> <p>LO: I can explain the function of a delimiter and use the sort function.</p> <p>LO: I can present my data graphically to make it easier to understand.</p> <p>LO: I can use conditional formatting to make a set of data easier to read at a glance.<br/>(Not PM lesson – teacher planned)</p> |

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|   |  | <b>formula, series fill, operation, conditional formatting, data set, analyse, delimiter, sort function</b>   |
| <p><b>Animated Stories (PM 1.6)</b></p> <ul style="list-style-type: none"> <li>✓ To know what an e-book is.</li> <li>✓ To add text, drawings and audio to an e-book.</li> <li>✓ To be able to explain who might like to read their e-book.</li> <li>✓ To understand when you would use Copy and Paste.</li> </ul> <p>LO: I can explain what an e-book is and explore drawing/text tools for creating an e-book.</p> <p>LO: I can add animation to a picture and save my changes.</p> <p>LO: I can add a sound effect, voice recording or music to a picture.</p> <p>LO: I can explain the function of Copy and Paste and use it to add more pages to my e-book.</p> <p>LO: I can explore different tools to make my e-book more engaging like changing the background or font.</p> <p><b>ebook, animation, save, open, sound effect, copy &amp; paste, tool</b></p> | <p><b>Charts and Graphs (see topic plan)</b></p> <ul style="list-style-type: none"> <li>✓ To be able to insert and then present it as a bar chart.</li> <li>✓ To be able to present two sets of data in the same chart.</li> <li>✓ To demonstrate using knowledge of one graphing program to create a graph in another.</li> </ul> <p>LO: I can present data in a bar chart using 2Graph on Purple Mash.</p> <p>LO: I can present two sets of data in a bar chart.</p> <p>LO: I can complete a bar chart challenge, presenting data to meet a given specification.</p> <p>LO: I can create and format a bar chart using Google Sheets. Children transfer knowledge of one program to another.</p> <p><b>bar chart, pie chart, data, cell, convert, highlight</b></p> | <p><b>3D Modelling (PM 5.6)</b></p> <ul style="list-style-type: none"> <li>✓ To use 3D modelling software to create simple 3D shapes.</li> <li>✓ To be able to edit and improve their modelling.</li> <li>✓ To explain the advantages of 3D printing.</li> </ul> <p>LO: I can draw and manipulate simple 3D shapes.</p> <p>LO: I can add detail to simple 3D shapes.</p> <p>LO: I can design a 3D model to fit a given criteria.</p> <p>LO: I can refine by ideas and improve my model.</p> <p><b>2D, 3D, 3D printing, pattern fill, Computer Aided Design, design brief, points, net, template, refine</b></p> |

## Digital Literacy

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| <p><b>Online Safety Cycle 1 (See Purple Mash and Twinkl both Years 1 and 2 for resources)</b></p> <ul style="list-style-type: none"> <li>✓ To know what SMART stands for in terms of online safety.</li> <li>✓ To know what personal information consists of.</li> <li>✓ To know personal information must not be shared online.</li> <li>✓ To know that we need to limit our screen time to stay healthy.</li> </ul> <p>LO: I can recall the SMART rules for staying safe online.</p> <p>LO: I can name the people I'd speak to if something I saw online made me feel unhappy.</p> <p>LO: I can create my own piece of work with my name and store it safely.</p> <p>LO: I can safely search the internet for an image.</p> <p>LO: I can explain what personal information I need to keep safe.</p> <p><b>digital footprint, website, internet, online, screentime, image, save, store</b></p> | <p><b>Online Safety Cycle 1 (From Twinkl Y3 unit)</b></p> <ul style="list-style-type: none"> <li>✓ To know on what devices cyber-bullying might take place.</li> <li>✓ To know to speak to a trusted adult if you are aware of any cyber-bullying or a victim of it yourself.</li> <li>✓ To know how to create a strong password.</li> <li>✓ To be able to explain some of the pros and cons of online communities.</li> <li>✓ To explain why it is important to manage your screentime.</li> </ul> <p>LO: I understand what cyber bullying is and how to address it.</p> <p>LO: I understand how websites use advertisements to promote products.</p> <p>LO: I can use a search engine safely and effectively. (See also Online Searchers and Surfers)</p> <p>LO: I understand privacy settings and how to create strong passwords.</p> <p>LO: I can identify different forms of online communication and can discuss the positive and negative aspects of online communities.</p> | <p><b>Online Safety Cycle 1 (PM 6.2)</b></p> <ul style="list-style-type: none"> <li>✓ To know when and what personal information you should give different software access to.</li> <li>✓ To understand that not everything on the internet is reliable and be able to identify clues to a website's validity.</li> <li>✓ To understand the implications of using or altering someone else's work (image, text, audio) and sharing this online.</li> </ul> <p>LO: I can identify the benefits and risks of giving personal information and device access to different software.</p> <p>LO: I can understand the advantages, disadvantages, permissions, and purposes of altering an image digitally and the reasons for this.</p> <p>LO: I can search the Internet with a consideration for the reliability of the results of sources and can check validity and understand the impact of incorrect information.</p> <p>LO: I can show an understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to use each</p> |
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|   | <p><b>cyber-bullying, advertisement, search engine, web browser, privacy settings, personal information, password, online community, safety features</b></p>   | <p>LO: I can create a digital resource to recap key online safety rules for KS2 children. (not PM)</p> <p><b>personal data, software, permissions, alter, ownership, copyright, validity, reliability, email, messaging apps, social media, encryption, age appropriate/inappropriate,</b></p>   |
| <p><b>Online Safety Cycle 2</b><br/><b>(See Purple Mash and Twinkl both Years 1 and 2 for resources)</b></p> <ul style="list-style-type: none"> <li>✓ To know what SMART stands for in terms of online safety.</li> <li>✓ To know that we need to limit our screen time to stay healthy.</li> <li>✓ To explain what a digital footprint is.</li> <li>✓ To know that some websites are only for adults and others are suitable for children.</li> </ul> <p>LO: I can recall the SMART rules for staying safe online.</p> <p>LO: I can name the people I'd speak to if something I saw online made me feel unhappy.</p> <p>LO: I can explain the meaning of 'digital footprint' and understand information I put online leave a digital footprint.</p> <p>LO: I can recognise whether a website is suitable for children.</p> <p>LO: I can recognise kind and unkind behaviour online.</p> <p><b>digital footprint, website, internet, online, screentime</b></p> | <p><b>Online Safety Cycle 2</b><br/><b>(From Twinkl Y4 unit)</b></p> <ul style="list-style-type: none"> <li>✓ To know how to report online content that makes you upset or uncomfortable.</li> <li>✓ To know what information can be safely included in an online profile.</li> <li>✓ To be able to explain some of the pros and cons of online communities.</li> <li>✓ To explain why it is important to manage your screentime.</li> <li>✓ To know to add 'to kids' when using a search engine.</li> <li>✓ To know that not all information on the internet is reliable.</li> </ul> <p>LO: I can explain some of the pros and cons of the online world and why it is important to manage my screen time. (own lesson)</p> <p>LO: I can use a search engine safely and effectively. (See also Online Searchers and Surfers)</p> <p>LO: I can create a safe online profile.</p> <p>LO: I can explain how to be a responsible digital citizen.</p> <p>LO: I can explain how to report information I see online that concerns me.</p> <p>LO: I can discuss why it can be difficult to know the reliability of information on the internet and consider what clues there are to online information's reliability. (own lesson)</p> <p><b>content, content creator, online profile, personal information, search engine, reliable, reliability, digital citizen, safety features</b></p> | <p><b>Online Safety Cycle 2</b></p> <p>LO: To consider the impact of electronic communication content; To explore the meaning of emojis and text-talk and their impact when communicating; To identify features of phishing emails</p> <p>LO: To understand the hidden costs of app usage and In-app purchasing; To explore information sharing and privacy settings; To understand that people we meet online might not be who they say they are; To explore what information and images we should and should not share online</p> <p>LO: To understand the importance of keeping passwords safe; To identify the features of a strong password; To consolidate understanding of e-safety.</p> <p>LO: To understand what is meant by cyber-bullying and explore similarities and differences between bullying and cyber-bullying.</p> <p><b>electronic communication, emoji, text talk, phishing, app, in-app purchase, age appropriate/inappropriate, social media</b></p> |
|   |  | <p><b>Strategic Searching Online (Twinkl Y5)</b></p> <ul style="list-style-type: none"> <li>✓ To understand the difference between a web browser and a search engine.</li> <li>✓ To know that the order in which search results are returned is dictated by how they are ranked, and what these rankings can be.</li> <li>✓ To be able to use Boolean operators to refine a search.</li> <li>✓ To know search engine results are gathered by web crawlers.</li> </ul>  |

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|  |  | <p>LO: I can complete an online search, appreciating how results are ranked.</p> <p>LO: I can use Boolean operators to complete a more accurate online search,</p> <p>LO: I can explain how a search engine works.</p> <p><b>web browser, search engine, rank, Boolean operator, web crawler/spider, results, homepage, upload/download</b></p> |
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**EYFS**

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| <p><b>Computer Science</b></p> <ul style="list-style-type: none"> <li>✓ Talk about technology that is used at home and at school such as smartphones, tablets, laptops, digital cameras, interactive whiteboards.</li> <li>✓ Talk about different types of information, such as pictures, videos, text and sounds.</li> <li>✓ Make a floor robot move randomly.</li> <li>✓ Make choices and predictions about what will happen when you press buttons on a floor robot or similar device.</li> </ul> <p><b>tablet, ipad, smartphone, camera, interactive whiteboard, beebot, picture, video, text, sound, button, forwards, backwards, left, right</b></p> | <p><b>Information Technology</b></p> <ul style="list-style-type: none"> <li>✓ Use safe online games play and learn.</li> <li>✓ Experiment with typing.</li> <li>✓ Type their own name.</li> <li>✓ Use technology to show their learning e.g. taking a photograph and adding a caption.</li> </ul> <p><b>online game, online safety, keyboard, type, photograph, caption.</b></p> | <p><b>Digital Literacy</b></p> <ul style="list-style-type: none"> <li>✓ Know to ask an adult when I want to use the internet.</li> <li>✓ Know to speak to an adult if something on the internet worries me.</li> <li>✓ Be able to talk about how much time I spend on digital devices and whether this is a healthy amount.</li> </ul> <p><b>screentime, limit, device</b></p> |
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## Christian Values in Computing

| Love  | Compassion   | Respect   | Faith   | Belonging   |
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|    |                     |   |    |    |
| <p><b>Creating</b> – using computing skills without fear of right or wrong we aim for our pupils to LOVE their computing.</p> | <p><b>Inspiration</b> - looking to others to help us improve and help others.</p>                    | <p><b>Respect</b> – respecting and celebrating both our work and that of our peers.</p>   | <p><b>Persevering</b> – keep trying and practising to perfect skills in all areas of computing.</p>   | <p><b>Team work</b> – working together to develop computing projects.</p>   |
| <p><b>Imagination</b> – look at things in unusual ways and use a range of media to create and present these ideas.</p>        | <p><b>Generalisation</b> - spotting patterns and adapting them e.g. when coding.</p>                 | <p><b>Open mindedness</b> – being open to appreciating the work of others and the similarities and differences in techniques.</p> | <p><b>Making mistakes</b> – enjoy things that go wrong and learn from them.</p>   | <p><b>Expanding horizons</b> – considering how ICT can further our learning and experiences in the present and the future</p> |
| <p><b>Cross curricular links</b> – using ICT to support and further our learning across the curriculum.</p>                   | <p><b>Compassion</b> – Understanding that we all have our own experiences, talents and opinions.</p> | <p><b>Tolerance</b> – understanding and respect for others and the work they produce.</p>   | <p><b>Self-confidence</b> – mastering and celebrating an a new skill by showcasing work increases your self-belief and growth mind-set.</p> | <p><b>Connections</b> – Using ICT to build positive connections between the school and the wider world.</p>                   |

# SMSC in Computing

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| <p><b>Spiritual Development</b></p>   | <p><b>Children:</b></p> <ul style="list-style-type: none"> <li>• Reflect on how their own and others' lives have been impacted through ICT.</li> <li>• <b>Reflect on their experiences</b> and demonstrate they are learning from these.</li> <li>• Respect feedback from their classmates and use this to <b>reflect</b>.</li> <li>• Ask questions, offer ideas and make connections.</li> </ul>  |
| <p><b>Moral Development</b></p>       | <p><b>Children</b></p> <ul style="list-style-type: none"> <li>• They incorporate mutual respect and the consideration for others' work.</li> <li>• Pupils are encouraged to show <b>compassion</b> when assessing the work of others. Understanding how their comments can build up or destroy another's <b>self-belief</b>.</li> <li>• Consider how inequalities in accessibility of ICT effects <b>inclusion</b> in various issues.</li> <li>• Learn that social media can have positive and negative impacts.</li> </ul>                            |
| <p><b>Social Development</b></p>     | <p><b>Children:</b></p> <ul style="list-style-type: none"> <li>• Work <b>cooperatively</b> with partners and in a structured and unstructured groups to produce work. •</li> <li>• <b>Discuss</b> the security risk to personal data and steps that can be taken to avoid this.</li> <li>• <b>Demonstrate personal qualities</b> such as thoughtfulness, honesty, respect for difference, moral principles, independence, inter-dependence, and understand that these qualities should be demonstrated even when acting anonymously online.</li> </ul> |
| <p><b>Cultural Development</b></p>  | <p><b>Children:</b></p> <ul style="list-style-type: none"> <li>• Use ICT to <b>learn more about the global community</b> of which we are citizens.</li> <li>• Use ICT to <b>explore</b> the sights and sounds of other cultures.</li> <li>• <b>Explore how ICT connects us</b> with people from our own community and across the globe.</li> </ul>   |

**British Values**

At the Peak Tor Federation we recognise that our Computing curriculum plays an important role in promoting British Values. We have planned our curriculum to ensure that through art and design our pupils can learn about the powerful messages art can convey and the impact it can have on others.

- **Tolerance** is promoted through listening to each other's ideas, creative responses and understanding of different cultures and styles within art. Children are encouraged to question and explore whilst maintaining tolerance and respect for the views of others.
- We teach **democracy** by being aware and considering the views and values of others, particularly when working collaboratively. We may take votes and hold discussions when making decisions about our work, and collaborative projects.
- **Rule of law**- We understand the school rules and guidelines and recognise their importance in keeping ourselves and our peers safe. We understand the importance of online safety.
- **Mutual respect & tolerance** – Pupils are taught to show respect for other opinions and the work that others produce.
- **Individual Liberty** - Pupils are given a chance to show their individuality through our projects. • Children have the opportunity to work independently and as a team to build resilience and self-esteem through tasks, sharing ideas and resources.