

Term	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn Units & Key Vocabulary <ul style="list-style-type: none"> • Computer Science • Information Technology • Digital Literacy 	Unit 1.1 Online Safety and Exploring Key Vocabulary: Login, logout, avatar, tools, username, my work, notification, save, password, topics. Unit 1.2 Grouping and Sorting Key Vocabulary: Sort, criteria. Unit 1.3 Pictograms Key Vocabulary: Pictogram, data, collate.	Unit 2.2 Online Safety Key Vocabulary: Search, display board, internet, sharing, email, attachment, digital footprint. Unit 2.3 Spreadsheets Key Vocabulary: Backspace key, copy and paste, columns, cells, count tool, delete key, equals tool, image toolbox, lock tool, move cell tool, rows, speak tool, spreadsheet. Unit 2.1 Coding Key Vocabulary: Action, algorithm, background, button, collision detection, debug, debugging, design mode, event, key pressed, nesting, object, predict, properties, run, scale, scene, sound, when clicked/swiped, sequence, test, text, timer.	Unit 3.2 Online Safety Key Vocabulary: Password, internet, blog, concept map, username, website, webpage, spoof website, PEGI rating. Unit 3.3 Spreadsheets Key Vocabulary: < > =, advance mode, copy and paste, columns, cells, delete key, equals tool, spin tool, move cell tool, rows, spreadsheet. Unit 3.1 Coding Key Vocabulary: Action, algorithm, background, alert, blocks of command, button, collision detection, debug, debugging, command, develop, execute, event, nesting, object, flowchart, plan, predict, output, repeat, properties, procedure, timer, sequence, sound, values, scene, test.	Unit 4.2 Online Safety Key Vocabulary: Computer virus, cookies, copyright, digital footprint, email, identify theft, malware, phishing, plagiarism, spam. Unit 4.1 Coding Key Vocabulary: Action, alert, background, button, code block, command, debug / debugging, execute, coordinates, flowchart, if / else, nesting, number variable, objects types, predict, prompt, prompt for input, repeat, properties, repeat until, selection, timer, variable, variable value.	Unit 5.2 Online Safety Key Vocabulary: Online safety, smart rules, password, reputable, encryption, identity theft, shared image, plagiarism, citations, reference, bibliography. Unit 5.4 Databases Key Vocabulary: Avatar, binary tree (branching database), charts, collaborative, data, database, find, record; sort, group and arrange; statistics and reports; table. Unit 5.1 Coding Key Vocabulary: Action, abstraction, algorithm, button, called, coordinates, decomposition, event, if, function, nesting, object, repeat, physical system, properties, run, score, sequence, simplify /simplified, simulation, tab, timer and variable.	Unit 6.2 Online Safety Key Vocabulary: Digital footprint, password, PEGI rating, phishing, screen time, spoof website. Unit 6.3 Spreadsheets Key Vocabulary: Average function, advance mode, copy and paste, columns, cells, charts, count (how many) tool, dice, equals tool, formula, formula wizard, move cell tool, random tool, rows, spin tool, spreadsheet, timer. Unit 6.1 Coding Key Vocabulary: Action, alert, algorithm, background, button, called, debug / debugging, command, coordinates, developer, decomposition, event, flowchart, function, get input, if / else, launch command, number variable, nesting, object, predict, procedure.
Autumn Core Concepts	1.1 - To log into Purple Mash, navigate the website; open, save and print work – logout 1.2 – To sort items using a range of criteria 1.3 – To understand that data can be represented in picture form	2.2 – To communicate safely online; recognise the importance of keeping personal data secure 2.3 – To use a spreadsheet for money calculations; use 2calculate to collect data and create a graph 2.1 – To create a program using an algorithm – debug simple programs	3.2 – To know about age restrictions on digital media; learn methods for password safety; consider the truth of website content 3.3 – To collect data and produce graphs; compare values; learn about cell ref. 3.1 – To know what a flow-chart is; design and create an interactive scene	4.2 – To understand how to protect from online identity theft – key vocab: digital footprint, plagiarism. Know about appropriate online behaviour 4.1 – To create a playable game; recognise and use: if / else, repeat until – to understand what a variable is and use coordinates in computer programming	5.2 – To gain greater understanding of the impact that sharing digital content can have – To know how to reference sources in work 5.4 – To search, contribute to and create databases 5.1 – To know about decomposition and abstraction; create strings (understand concatenation)	6.2 – To identify benefits and risks for: broadcasting location, sharing information, influences of technology on health and the environment 6.3 – To use spreadsheets to investigate, calculate and plan 6.1 – To design a playable game with a timer and score plan and use selection and variables

<p>Spring Units & Key Vocabulary</p> <ul style="list-style-type: none"> • Computer Science • Information Technology • Digital Literacy 	<p>Unit 1.6 <u>Animated Story Books</u> Key Vocabulary: Animation, file, E-book, sound effect, font, display board.</p> <p>Unit 1.5 <u>Maze Explorers</u> Key Vocabulary: Direction, challenge, arrow, undo, rewind, forward, backwards, right turn, left turn, debug, instruction, algorithm.</p> <p>Unit 1.4 <u>Lego Builders</u> Key Vocabulary: Instruction, algorithm, computer, program, debug.</p>	<p>Unit 2.6 <u>Creating Pictures</u> Key Vocabulary: Impressionism, palette, pointillism, share, surrealism, template.</p> <p>Unit 2.5 <u>Effective Searching</u> Key Vocabulary: Internet, search, search engine.</p> <p>Unit 2.7 <u>Making Music</u> Key Vocabulary: Bpm (beats per minute), composition, digitally, instrument, music, Sfx (sound effects), soundtrack, tempo, volume.</p>	<p>Unit 3.4 <u>Touch typing</u> Key Vocabulary: Posture, top row keys, home row keys, bottom row keys, space bar.</p> <p>Unit 3.5 <u>Email</u> (Including Email Safety) Key Vocabulary: Communication, email, compose, send, CC, attachment, formatting, report to the teacher, password, address book, save to draft.</p>	<p>Unit 4.3 <u>Spreadsheets</u> Key Vocabulary: Average, advance mode, copy and paste, columns, cells, charts, equals tool, formula, formula wizard, move cell tool, random tool, rows, spin tool, spreadsheet, timer.</p> <p>Unit 4.4 <u>Writing for different audiences</u> Key Vocabulary: Font, bold, italic, underline.</p>	<p>Unit 5.3 <u>Spreadsheets</u> Key Vocabulary: Average, advance mode, copy and paste, columns, cells, charts, equals tool, formula, formula wizard, move cell tool, random tool, rows, spin tool, spreadsheet, timer.</p> <p>Unit 5.5 <u>Games Creator</u> Key Vocabulary: Animation, computer game, customise, evaluation, image, instructions, interactive, screen shot, texture, perspective, playability.</p>	<p>Unit 6.6 <u>Networks</u> Key Vocabulary: Internet, World Wide Web, network, router, local area network (LAN), wide area network (WAN), network cables, wireless,</p> <p>Unit 6.7 <u>Quizzing</u> Key Vocabulary: Audience, collaboration, concept map, database, quiz.</p>
<p>Spring Core Concepts</p>	<p>1.6 - To introduce e-books and add animation to a story</p> <p>1.5 – To use directional keys as part of an algorithm</p> <p>1.4 – To consider how the order of instructions affects the results</p>	<p>2.6 – To learn the functions of the 2paint a picture tool – to learn about and re-create artwork online</p> <p>2.5 – To understand terminology associated with searching the internet</p> <p>2.7 – To make music digitally, using 2sequence</p>	<p>3.4 – To use typing terminology and type with both left and right hands</p> <p>3.5 – To use email safely; open and respond to emails and add attachments</p>	<p>4.3 – To format cells and calculate averages – add formula to a cell</p> <p>4.4 – To use simulated scenarios to produce writing – explore how layout can affect the impact of a text</p>	<p>5.3 – Use a spreadsheet to model a real-life problem (use formulae and count tool)</p> <p>5.5 – To design, create, share and evaluate games</p>	<p>6.6 – To learn about what the internet consists – how it is used – origins</p> <p>6.7 – To learn about different question types; create a relevant quiz for a given audience</p>

Executive Summary for: **Computing**

Date: **Spring 2021**

Leader: **Mrs Jennifer Harris**

Link Governor: **Angela Johnson**

<p>Summer Units & Key Vocabulary</p> <ul style="list-style-type: none"> • Computer Science • Information Technology • Digital Literacy 	<p>Unit 1.7 Coding Key Vocabulary: Action, code, event, instructions, output, scale, scene, algorithm, command, execute, object, run, when clicked, background, debug, debugging, input, properties, sound.</p> <p>Unit 1.8 Spreadsheets Key Vocabulary: Arrow keys, backspace key, cursor, columns, cells, clipart, count tool, delete key, image tool box, lock tool, move cell tool, rows, speak tool, spreadsheet.</p> <p>Unit 1.9 Technology Outside School Key Vocabulary: Technology.</p>	<p>Unit 2.4 Questioning Key Vocabulary: Pictogram, question, data, collate, Binary tree, avatar, database.</p> <p>Unit 2.8 Presenting Ideas Key Vocabulary: Concept map (mind map), quiz, presentation, node, animated, non-fiction, narrative, audience.</p>	<p>Unit 3.6 Branching Databases Key Vocabulary: Branching database, data, database, question.</p> <p>Unit 3.7 Simulations Key Vocabulary: Simulation.</p> <p>Unit 3.8 Graphing Key Vocabulary: Graph, field, data, bar chart, block graph, line graph.</p>	<p>Unit 4.5 Logo Key Vocabulary: LOGO, BK, FD, RT, LT, REPEAT, SETPC, SETPSPU, PD.</p> <p>Unit 4.6 Animation Key Vocabulary: Animation, background, frame, flipbook, onion skinning, stop motion, play, sound, video clip.</p> <p>Unit 4.7 Effective Searching Key Vocabulary: Easter egg, internet, internet browser, search, search engine, website, spoof website.</p>	<p>Unit 5.6 3D Modelling Key Vocabulary: CAD, modelling, 3D, viewpoint, polygon, 2D, net, 3D printing, points, template.</p> <p>Unit 5.7 Concept Maps Key Vocabulary: Audience, collaboratively, concept, concept map, connection, idea, node, thought, visual.</p>	<p>Unit 6.4 Blogging Key Vocabulary: Audience, blog, blog page, blog post, collaborative, icon.</p> <p>Unit 6.5 Text Adventures Key Vocabulary: Text-based adventure, concept map, debug, sprite, function.</p>
<p>Summer Core Concepts</p>	<p>1.7 – To plan and make a computer program using code; understand what objects, actions and events are</p> <p>1.8 – To recognise and use a basic spreadsheet program; lock, move cells, speak and count</p> <p>1.9 – To find examples of technology outside of school</p>	<p>2.4 – To learn about data handling tools – construct a binary tree</p> <p>2.8 – To explore how information can be presented in different ways; make a presentation to the class</p>	<p>3.6 – To sort objects; complete and create a branching database</p> <p>3.7 – To explore, analyse and evaluate a simulation</p> <p>3.8 – To enter data and answer questions; solve an investigation and present results in graphic form</p>	<p>4.5 – To learn the structure of the coding language of logo; use and build procedures in Logo</p> <p>4.6 – To explore how animations can be created; create stop motion animations</p> <p>4.7 – To use search effectively to find information; assess whether an information source is true and reliable</p>	<p>5.6 – To explore the effect of moving points when designing; design, refine and print a 3D model</p> <p>5.7 – To understand the need for visual representation when generating and discussing complex ideas – create concept maps for different uses</p>	<p>6.4 – To plan the theme and content for a blog; to write a blog and blog post</p> <p>6.5 – To plan and make a story-based adventure</p>

INTENT/WHY?

Technology is everywhere and will play a pivotal part in students' lives. At St Mary's we aim to prepare our learners for their future by giving them the opportunities to gain knowledge and develop skills that will equip them for this ever changing digital world. We want to model and educate our pupils to ensure that children become competent in safely using, as well as understanding, technology; enabling children to be confident, creative and independent learners. We recognise that the best prevention for a lot of issues we currently see with technology/social media is through education. We want children to know more, remember more and understand more in computing so that they leave primary school computer literate. Our Computing curriculum focuses on clear progression of skills so the sequence of learning builds upon prior knowledge. We want our pupils to be creators and our broad curriculum encompassing computer science, information technology and digital literacy reflects this. These strands are revisited repeatedly through a range of themes during children's time in school to ensure the learning is embedded and skills are successfully developed. Our whole curriculum is shaped by our school vision which aims to enable all children, regardless of background, ability, additional needs, to flourish to become the very best version of themselves they can possibly be. Our intention is that Computing also supports children's creativity and cross curricular learning to engage children and enrich their experiences in school. Our knowledge rich curriculum has to be balanced with the opportunity for pupils to apply their knowledge creatively which will in turn help our pupils become skilful computer scientists.

LINKS TO? (Cross curricular History, Geography and Science links, PSHE, Values etc)

Whole Year Some initial suggestions for curriculum links. DP Autumn focus: curriculum design based on feedback from Purple Mash unit trials.	All year groups begin the Autumn term with an Online Safety computing unit to revisit, refresh and embed expectations - linking our school E-Safety Rules to our Whole School Vision and Golden Rules.					
	A2 units could link to Geography: Weather and seasons unit. Sp1 Animated story books unit could link to English text: The tiger who came to tea. Su2 Spreadsheets unit could link to Geography: continents and oceans learning.	A1 Spreadsheets unit could link to Science: Materials good choices unit. Sp1 Creating pictures unit could link to History and Art units: Great fire of London Su1 unit Questioning (binary trees) could link to Science: Apprentice Gardener learning.	Sp2 Email unit could be linked to the PSHE healthy me topic or one of the literacy texts. Su2 Graphing could be linked to maths or to DT cooking projects.	Sp1 Spreadsheets could link to current maths work or Amazon rainforest work (topic swap pending). Sp2 Writing for different audiences could link to Varjak Paw literacy or History Victorians unit. Su2 Animation unit could link to Literacy: Gregory Cool.	Sp1 Spreadsheets could link with Maths or Geography: European Region work. Sp2 Game Creator could be linked to Midas touch and Ancient Greece topic work. Su2 Concept maps could be used to help with planning across the curriculum.	In Y6 the children will take part in life skills workshops which will link in with their E-Safety computing work. Sp2 the Quizzing unit can be linked to a number of cross curricular topics or to draw on children's own interests. Su1 Blogging could link to Science: Healthy eating.