



William Penn Curriculum Map - Computing

	Autumn		Spring		Summer	
Cycle A						
Year R	How to?	Who Lives in Fairy Tales?	Who Made these Footprints?	What's in our Garden?	What Makes a Hero?	How Have we Grown this Year?
Year 1/2	Once Upon a Rhyme	Fire, Fire! (Great Fire of London)	From Arctic to Africa	Pop Art	Postcards from the Past (Victorians)	Make, Move and Perform Puppets
Year 3/4	Raging Rivers	Rocks, Soils and Fossils	The Roman Empire	Volcanoes	Vikings (Life and Legend)	Good Vibrations
Year 5/6	We'll Meet Again (WW2)	Light	Heads Will Roll (Tudors)	Counties of the UK	Ancient Mayan Civilization	Rainforests and Sustainability
Cycle B						
Year R	How to?	Who Lives in Fairy Tales?	Who Made these Footprints?	What's in our Garden?	What Makes a Hero?	How Have we Grown this Year?
Year 1/2	Who Lives Here?	Maps, Moats and Mighty Castles	Wacky Weather	Spring has Sprung (Plants)	Back in Time for... (Decades)	Down in the Jungle
Year 3/4	Ancient Ancestors	Changing State	We're Sailing Down the Nile (Ancient Egypt)	Opposites Attract (Magnets)	Born in the USA	Plants
Year 5/6	Across the Universe (Space)	Frosty Relations (Cold War)	'Toil and Trouble' (Macbeth)	Crime and Punishment	Friends and Heroes (Quakerism And Democracy)	The Final Year

25/09/2026

Subject Coverage Overview

Skills/Themes	Computer Science	Information Technology	Digital Literacy
	Autumn	Spring	Summer
	Cycle A		
Year R	Weekly 2BeSafe Assembly	Weekly 2BeSafe Assembly	Weekly 2BeSafe Assembly
Year 1/2	Introduction to PM (1) Creative Computing (1) Weekly 2BeSafe Assembly	Creating Pictures (2) Spreadsheets (2) Weekly 2BeSafe Assembly	Coding (1) Coding (2) Weekly 2BeSafe Assembly
Year 3/4	Email (3) Unpacking Hardware and Software (4) Weekly 2BeSafe Assembly	Effective Searching (4) Coding (3/4) Weekly 2BeSafe Assembly	Presentations (3) Spreadsheets (3) Weekly 2BeSafe Assembly
Year 5/6	Quizzing (5) Game Creator (5) Weekly 2BeSafe Assembly	Graphing (6) Spreadsheets (6) Weekly 2BeSafe Assembly	Coding (5/6) Word Processing (5) Weekly 2BeSafe Assembly
	Cycle B		
Year R	Weekly 2BeSafe Assembly	Weekly 2BeSafe Assembly	Weekly 2BeSafe Assembly
Year 1/2	Introduction to PM (1) Route Explorers (2) The Internet (2) Weekly 2BeSafe Assembly	Data Explorers (1) Making Beats (1) Weekly 2BeSafe Assembly	Creating and Following Instructions (1) Technology Around Us (1) Weekly 2BeSafe Assembly
Year 3/4	Logo (4) Branching Databases (3) Weekly 2BeSafe Assembly	Sound Stories (4) Coding (3/4) Weekly 2BeSafe Assembly	Touch Typing (3) Introduction to AI (4) Weekly 2BeSafe Assembly
Year 5/6	Networks (6) Blogging (6) Weekly 2BeSafe Assembly	Concept Maps (5) Coding (5/6) Weekly 2BeSafe Assembly	Introduction to Python (6) Spreadsheets (5) Weekly 2BeSafe Assembly

EYFS Expectations Expecations – Understanding the World Technology in our world					
Playing & Exploring - Engagement		Active Learning - Motivation		Creating & Thinking Critically - Thinking	
- Finding out & exploring - Playing with what they know - Being willing to 'have a go'		- Being involved & concentrating - Keep on trying - Enjoying achieving what they set out to do		- Having their own ideas - Making links - Working with ideas	
ELG None Vocabulary: computer, tablet, screen, camera, app, instructions, technology, internet, online, offline					
Focus	Technology in our world	Using technology	Algorithms & problem solving	Use of IT beyond school	Safe use
Reception	Recognise that technology is used in homes, school and wider world; talk about different types of technology and what they are used for	Use age-appropriate devices such as tablets, computers, cameras, interactive whiteboard with increased independence	Follow and give simple instructions; understand that instructions need to be in the right order; explore simple programmable toys	Begin to list different IT in their home	- Begin to give reasons why we need to stay safe online - Know to talk to a trusted adult if something worries them.

Key Stage 1 Coverage:

Year 1/2 Cycle A	Once Upon a Rhyme / Fire! Fire!	From Artic to Africa / Pop Art	Postcards from the Past / Move, Move and Perform Puppets
	Introduction to PM (1) Creative Computing (1)	Creating Pictures (2) Spreadsheets (2)	Coding (1) Coding (2)
	By the end of these units: Pupils will know: - How can I create my own Avatar? - How do I save work to the My Work area? - How can I complete 2Dos? - How do I use the paint tool? - How do I make and share jigsaws? - How do I use 2DIY? - How do I create images and use these to make a game? Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content Essential vocabulary: Vocabulary for Introduction to PM: Avatar, file name, home page, icon, login, logout, password, save, 2Do Vocabulary for Creative Computing: arrow keys, digital art, drag and drop, hotspot, touch screen gestures, line width, burger menu	By the end of these units: Pupils will know: - How do I create digital art in an impressionist style? - How do I create art in a Pointillism style? - How do I create digital art in the style of Piet Mondrian's work? - To create digital art patterns in the style of the Arts and Crafts movement - What is a spreadsheet and how to navigate one using 2Caluclate - How can you edit and improve a spreadsheet to make information clear? - How can spreadsheets complete calculations automatically? Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content Essential vocabulary: Vocabulary for Creating Pictures: Arts and Crafts, digital portfolio, fill tool, image picker, import, impressionism, outline, palette, repeating pattern, resize Vocabulary for: cell, axis/axes, column, row, spreadsheet, value, controls toolbar	By the end of these units: Pupils will know: - How do computers follow code? How do they use object and action blocks? - What is an event in coding? - What is the output and how do we read code? - How can we change the design? - How can we write code for a computer program? - How do we create computer programs using an algorithm? - What is collision detection and how is it used in a program? - How can we use a timer? - How do different objects have different attributes? Children will be able to: - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs Essential vocabulary: Vocabulary for Coding 1: action, command, algorithm, debugging, attribute, design view, code, event, code blocks, instruction, code view, object, coding Vocabulary for Coding 2: action, command, attribute, debug, algorithm, event, bug, object, button object, output, collision detection, program

Year 1/2 Cycle B	Who Lives Here? / Maps, Moats and Mighty Castles	Wacky Weather / Spring has Sprung	Back in Time for... / Down in the Jungle
	Introduction to PM (1) Route Explorers (2) The Internet (2)	Data Explorers (1) Making Beats (1)	Creating and Following Instructions (1) Technology Around Us (1)
	By the end of these units: Pupils will know: - How do I login and create my own avatar on purple mash? - How do I open and save my work to the work area? - How do I complete 2Dos? - How do you use the direction keys in 2Go? - How do you use units of distance in 2Go? - How do you build an algorithm in 2Go? - How do the internet, World Wide Web and browser work together? - How do different types of hardware access the internet? Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content - recognise common uses of information technology beyond school Essential vocabulary: Vocabulary for Introduction to PM: avatar, file name, home page, icon, login, logout, password, save Vocabulary for Route Explorers: Algorithm, coding, computer bug, command, debugging, direction Vocabulary for The Internet: browser, smart device, home page, internet, search engine, smart device, webpage, WiFi, World Wide Web	By the end of these units: Pupils will know: - How do we group items? How do we group items using a computer? - How can you sort items on a computer? - What is data? What data can be shown using pictures? - How is music made by a computer different to a real instrument? What sounds do different musical instruments make in the 2Beat tool? - How can we compose a tune to match a picture of a scene? - How and why can we alter the tempo? Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content Essential vocabulary: Vocabulary for Data Explorers: algorithm, criteria, data, group, pictogram, sort Vocabulary for Making Beats: beat, compose, digital, musical instrument, tempo, tune	By the end of these units: Pupils will know: - What is an algorithm? - How can I follow and create a simple set of instructions on a device? - How can I sequence algorithms that require a correct order? - What does the word technology mean? What technology is used in school? - What technology is used world wide? - How can we use devices safely? Children will be able to: - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs - recognise common uses of information technology beyond school - use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. Essential vocabulary: Vocabulary for Creating and Following Instructions: algorithm, coding, computer bug, debugging, instructions, program Vocabulary for Technology Around Us: device, digital technology, electronic, hardware, technology,

Year 3/4
Key Stage 2 Coverage:

Year 3/4 Cycle A	Raging Rivers / Rocks, Soils and Fossils	The Roman Empire / Volcanoes	Vikings (Life and Legend) / Good Vibrations
	Email (3) Unpacking Hardware and Software (4)	Coding (3/4) Effective Searching (4)	Presentations (3) Spreadsheets (3)
	By the end of these units: Pupils will know: - How do people communicate with each other? - How do we respond to emails? - How do we compose and email and add an attachment? - How do we use email safely? - What is technology, where do we see it in everyday life and how does it help us at school, home and beyond - What are the different pieces of computer hardware and what are their functions? - How do hardware and software interact to complete everyday tasks? Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content - recognise common uses of information technology beyond school Essential vocabulary: Vocabulary for Email: address book, attachment, email, correspond, recipient, trusted contact, compose Vocabulary for Unpacking Hardware and Software: software, application, input, output, component, storage, computer system, peripheral, process, hardware	By the end of these units: Pupils will know: Coding: - Y3 – lesson 1 Using flowcharts - Y3 – lesson 2 Using timers - Y4 – lesson 2 'If' statements - Y4 – lesson 3 Coordinates - Y3 – lesson 4 Code, test and debug - Y4 – lesson 1 Design, code, test and debug - How does a search engine work online? - How does a search engine collect, sort and rank results and why do some results appear first? - How can you improve searches to find the most accurate and useful results quickly? Children will be able to: - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs - use technology purposefully to create, organise, store, manipulate and retrieve digital content - recognise common uses of information technology beyond school Essential vocabulary: Vocabulary for coding: alert, algorithm, attribute, button object, collision detection, design, event, interval, nesting, object, repeat, sequence, timer, turtle object, If/else statements, co-ordinates Vocabulary for Effective Searching: crawl, exact match, fake news, internet, keywords, search box, search engine, snippet, filter, refine, relevance, reliable source, virtual assistant device	By the end of these units: Pupils will know: - How do you create a PowerPoint on a desktop/online? - How do you create Google slides? - How do you use Apple Keynote? - How do you use 2Calculate in Advance mode? - How do you use the arrows in the toolbar to total rows and columns? - How do you use simple formulae in a spreadsheet? Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content Essential vocabulary: Vocabulary for Presentations: animation, media, slideshow, font, PowerPoint, text, format, slide, transition, handles, slide notes, word art Vocabulary for spreadsheets: advanced mode, formula bar, operations, copy tools, formula wizard, range, data, function, sheet, merge, total tools

Year 3/4 Cycle B	Ancient Ancestors / Changing States	We're Sailing down the Nile / Opposites Attract (magnets) (Ancient Egypt)	Born in the USA / Plants
	Logo (4) Branching Databases (3)	Sound Stories (4) Coding (3/4)	Touch Typing (3) Introduction to AI (4)
	By the end of these units: Pupils will know: - How do you key commands and simple instructions? - How can you use commands to create shapes using multi-lined mode? - How can you use the repeat command? - How do you use procedures to write instructions? - How can 'Yes' and 'No' questions be used to sort objects? - How can branching databases be used effectively? - How can you plan and create a branching database? Children will be able to: - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs Essential vocabulary: Vocabulary for Logo: Logo, pen down, repeat, logo commands, pen up, set PC, multi-line mode, procedure, Set PS Vocabulary for branching databases: binary choice, data, debug, binary tree, database, record, branching database	By the end of these units: Pupils will know: - How are audiobooks effective – what makes them engaging? - How can You plan and write an engaging script for an audiobook? - How can you record clear narration and add sound effects? - How can you edit and improve your audiobook? Coding: - Y3 – lesson 3 Using repeats - Y4 – lesson 4 Repeat Until and 'if/else' variables - Y4 – lesson 5 Number variables - Y3 – lesson 5 Design and make an interactive scene - Y3 – lesson 6 Design and make an interactive scene - Y4 – lesson 6 Make a playable game Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs Essential vocabulary: Vocabulary for Sound Stories: audiobook, playback, sound technician, recording, sound effects, track, timeline, background music, edit, editor Vocabulary for Coding: alert, algorithm, attribute, button object, collision detection, design, event, interval, nesting, object, repeat, sequence, timer, turtle object, If/else statements, co-ordinates	By the end of these units: Pupils will know: - How do we position our fingers when touchtyping? - How do we type numbers accurately and use the shift key for capital letters? - How do we practise typing punctuation marks and symbols and build accuracy with simple words? - How can practise typing sentences using capital letters, spaces and full stops? - What is AI and what tasks does it carry out? - How can we communicate effectively with AI tools by writing clear and precise prompts? - How can we be a good digital citizen when using AI Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content - recognise common uses of information technology beyond school - use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. Essential vocabulary: Vocabulary for Touch Typing: bottom keys, home keys, number row, posture, space bar, top keys, keyboard, shift key, typing Vocabulary for Introduction to AI: Artificial Intelligence, generative AI, prompt, automation, human oversight, refine, data, innovation, responsible behaviour, digital citizenship, prediction, trustworthy, reliable

Year 5/6
Key Stage 2 Coverage:

Year 5/6 Cycle A	We'll Meet Again / Light	Heads Will Roll / Counties Of The UK	Ancient Mayan Civilization / Rainforests and Sustainability
	Quizzing (5) Game Creator (5)	Graphing (6) Spreadsheets (Google sheets) (6)	Coding (5/6) Word Processing (Google Docs) (5)
	By the end of these units: Pupils will know: - What are the different types of quizzes and what are their strengths and weaknesses? - How do you explore the features of 2Quiz? - How do you explore 2Quiz? How could you create an educational game? - How do you evaluate the features of a successful game? - How can you plan a game in 2DIY3D? How can you use game sprites? - How can you add features to a game world and check playability? How do you evaluate games created by others? Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content - recognise common uses of information technology beyond school - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs Essential vocabulary: Vocabulary for Quizzing: quiz, interactive, features, simple, advanced, debug Vocabulary for Game Creator: 2D game, 3D game, game design, game environment, game feedback, game genre, playability, sprite, sprite animation	By the end of these units: Pupils will know: - How do you create comparative bar charts using graphing software? - How do you create pie charts using graphing software? - How do you create line graphs using graphing software? - How do you use basic formatting in Google sheets? - How can you develop your skills in using basic functions in Google Sheets? - How can you create a format charts in Google Sheets? How can you sort and filter data within a spreadsheet? Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content Essential vocabulary: Vocabulary for Graphing: chart, comparative bar chart, data, dataset, pie chart, dual bar chart, line graph Vocabulary for Spreadsheets: cell, formatting, sort, chart, chart labels, formula, sum, column, function, row, workbook, filter, row, worksheet	By the end of these units: Pupils will know: Coding - Y5 - lesson 1 Coding Efficiently - Y5 - lesson 2 Simulating a physical system - Y5 - lesson 5 Friction and functions - Y5 - lesson 5 Introducing Strings - Y5 - lesson 6 Text Variable and Concatenation - Y6 - lesson 5 User Input - How do you format text in Google Doc and save it with an appropriate filename? - How do you edit text and apply more advanced formatting? - How can you adjust the layout of a Google Doc? How do you insert and format images in Google Docs? Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs Essential vocabulary: Vocabulary for Coding: abstraction, action, event, flowchart, algorithm, function, coordinates, If statements, concatenation, If statements, If/Else statements, datatype, decomposition, initialize, hotspot, clone Vocabulary for Word Processing: bullet points, editing, page margins, copy, font, paste, cut, formatting, text alignment, cut, formatting, text alignment, document, handles, text wrapping

Year 5/6 Cycle B	Across the Universe / Frosty Relations (Cold War)	Toil and Trouble / Crime and Punishment	Friends and Heroes (Quakerism and Democracy) A Local History Study / The Final Year
	Networks (6) Blogging (6)	Concept Maps (5) Coding (5/6)	Introduction to Python (6) Spreadsheets (2Calculate) (5)
	By the end of these units: Pupils will know: - What is a computer network and identify examples of networks at home, school and in the wider world? - What is the difference between the internet and the World Wide Web? - How can the internet be used collaboratively safely and respectfully? Who is in charge of the internet and how do rules and website blocking affect people? - What are the features of a blog? - How can you plan the theme, content and structure for a blog post? - How do you write and style a blog post? How do you review and comment with an understanding of online safety? Children will be able to: - recognise common uses of information technology beyond school - use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. Essential vocabulary: Vocabulary for Networks: email, network, web browser, internet, router, website, internet chat, video call, Wi-Fi, LAN (Local Area Network), WAN (Wide Area Network), World Wide Web (WWW) Vocabulary for Blogging: approval, blog, blog post, draft, commenting, edit, hyperlink, moderation, netiquette, plan, publish, revise, vlog	By the end of these units: Pupils will know: - What is a concept map and why is it useful? - How can concept maps be used? - How can you plan and create a non-fiction concept map? Can you present a concept map on a specific topic to an audience? Coding - Y6 – lesson 1 Designing and writing a more complex program - Y6 – lesson 2 Designing and writing a more complex program - Y5 – lesson 3 Decomposition and Abstraction - Y6 – lesson 3 Using functions - Y6 – lesson 4 Flowcharts and control simulations - Y6 – lesson 6 Text Adventure Children will be able to: - use technology purposefully to create, organise, store, manipulate and retrieve digital content - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs Essential vocabulary: Vocabulary for Concept Maps: body language, concept maps, connecting line, intonation, node, node settings, present, structure, template Vocabulary for Coding: abstraction, action, event, flowchart, algorithm, function, coordinates, If statements, concatenation, If statements, If/Else statements, datatype, decomposition, initialize, hotspot, clone	By the end of these units: Pupils will know: - What is Python and how do you enter simple commands? - How can you use Python to perform mathematical calculations? - How can you use repetition and Python library functions? - How do you extend your understanding of formulae and functions from previous learning? - How do you use formulae in 2 Calculate to convert measurements between different units? - How do you use 2Calculate to create and interpret line graphs that show how data changes over time? - How can you analyse weather data by using spreadsheets to identify patterns? Children will be able to: - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs - use technology purposefully to create, organise, store, manipulate and retrieve digital content - recognise common uses of information technology beyond school Essential vocabulary: Vocabulary for Python: command, library, sprite, co-ordinate, loop, string, floating point number, modulo operator, range, floor division, print, variable, function, sleep Vocabulary for Spreadsheets: Axis/axes, forecast, line graph, budget, formula, meteorologist, continuous data, income, plot/plotting, conversion, function, trend

