

Mayflower Skills Progression Map

Subject: Computing

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	Nursery	Content: Devices Identifying different devices, their different uses and how to control them	Content: Drawing and Painting Using drawing and painting apps to document experiences and create portraits.	Content: Patterns Creating patterns and predicting continuing patterns in different contexts.	Content: Programming Exploring Beebots to create simple programmes.	Content: Photography Taking photographs to document experiences, portraits.	Content: Sound Using devices to record and listen back to different types of sounds.
	Reception						
KSI	Year 1	Content: Technology Around Us. Recognising technology in school and using it responsibly.	Content: Digital Painting. App: Paintz Link to aboriginal art Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.	Content: Moving a Robot. App: Bee Bot Writing short algorithms and programs for floor robots, and predicting program outcomes.	Content: Grouping Data. Unplugged unit Link to Science - Materials Exploring object labels, then using them to sort and group objects by properties.	Content: Digital Writing. Microsoft Word Link to English - publishing Using a computer to create and format text, before comparing to writing non-digitally.	Content: Programming Animations. App: Beebot Link to Maths Designing and programming the movement of a character on screen to tell stories.
		Key Vocabulary: Technology, Computer, mouse/trackpad, keyboard, screen, click, drag, Input device, mouse, Shift, space bar, capital letter, full stop, Safely, responsibly.	Key Vocabulary: paint program, tool, paintbrush, erase, fill, undo, Piet Mondrian, primary colours, shape tools, line tool, fill tool, undo tool, Henri Matisse, shape tool, fill tool, Wassily Kandinsky, tools, feelings, colour, brush style, Georges Seurat, Pointillism, brush size, Pictures, painting, computers, like, prefer, dislike.	Key Vocabulary: Forwards, backwards, turn, clear, go, commands, Instructions, directions, Left, right, Plan, algorithm, program, route	Key Vocabulary: Object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, least, the same	Key Vocabulary: Word processor, keyboard, keys, letters, Microsoft Word, Google Docs, numbers, space, backspace, text cursor, Microsoft Word, Google Docs, capital letters, toolbar, bold, italic, underline, mouse, cursor, select, font, toolbar, undo, font, toolbar,	Key Vocabulary: Scratch, Bee-Bot, command, sprite, compare, programming, programming area, Block, joining, command, Start block, run, program, programming area, background, delete, reset, algorithm, predict, Effect, change, value, Instructions, delete, program, background, appropriate, algorithm, design, programming blocks,
		Online Safety: Smartie the Penguin – Year 1, Story A	Online Safety: Digiducks big decision	Online Safety: Safer Internet Day: Feb 6th 2024 Theme: inspiring positive change online, challenging pupils to complete five interactive tasks together ” (Google assembly.)	Online Safety: Online Safety: Jessie & Friends Episode 1: Watching Videos	Online Safety: Jessie & Friends Episode 2: Sharing Pictures	Online Safety: Online safety: Jessie & Friends Episode 3: Playing Games.
	Year 2	Content: Information Technology Around Us. Identifying IT and how its responsible use improves our world in school and beyond.	Content: Digital Photography. Online editing tool: Pixlr Link to visit to Victoria Park Capturing and changing digital photographs for different purposes.	Content: Robot Algorithms. App: Blue Bot Creating and debugging programs, and using logical reasoning to make predictions.	Content: Pictograms. J2Data: Pictogram Link to Maths Collecting data in tally charts and using attributes to organise and present data on a computer.	Content: Making Music. The Song Maker tool (musiclab.chromeexperiment.com/Song-Maker) Link to Music Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.	Content: An Introduction to Quizzes. Scratch Junior Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.
		Key Vocabulary: Information technology (IT), computer, computer, barcode, scanner/scan.	Key Vocabulary: Device, camera, photograph, capture, image, digital, framing, subject, compose, Light sources, flash, focus, background, Editing, filter, Format, lighting.	Key Vocabulary: Instruction, sequence, clear, unambiguous, algorithm, program, Sequence, prediction, Artwork, design, route, mat, debugging	Key Vocabulary: More than, less than, most, least, organise, data, object, tally chart, votes, total, Pictogram, enter, data, compare, count, explain, more, less, more common, least common, Attribute, group, same, different, object, more than/less than, most/least, most popular, least popular, conclusion, block diagram, sharing	Key Vocabulary: Music, planets, Mars, Venus, war, peace, quiet, loud, feelings, emotions, Pattern, rhythm, pulse, notes, instrument, tempo, Create, emotion, pitch, pulse/beat, rhythm, notes, Open, edit	Key Vocabulary: Sequence, command, program, run, start, outcome, predict, blocks, Sprite, algorithm, design, sequence, Actions, project, modify, change, Compare, debug, program, features, evaluate

		Online Safety: Digiduck saves the day	Online Safety: Online Safety: Lee & Kim: Animal Magic Lessons 1 & 2	Online Safety: Safer Internet Day: Feb 6th 2024 Theme: inspiring positive change online, challenging pupils to complete five interactive tasks together ” (Google assembly.)	Online Safety: Be Internet Legends: Digital Wellbeing (7-9) Lesson 1: Screen time & our Feelings	Online Safety: Online Safety: Be Internet Legends: Digital Wellbeing (7-9)Lesson 2: Healthy Digital Habits	Online Safety: Project Evolve lessons (2) Health, wellbeing & lifestyle
KS2	Year 3	<i>Content:</i> Connecting Computers. Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.	<i>Content:</i> Stop-frame Animation. App: Stop Motion Link to Haring/English – animation on Rama and the Demon King Capturing and editing digital still images to produce a stop-frame animation that tells a story	<i>Content:</i> Sequence in Music. Web Browser: Scratch (block) Creating sequences in a block-based programming language to make music.	<i>Content:</i> Branching Databases. Online database tool j2data Link to Science Building and using branching databases to group objects using yes/no questions.	<i>Content:</i> Desktop Publishing. Microsoft Publisher/ Adobe Spark app Link to English – creating menus for Chinese restaurant Creating documents by modifying text, images, and page layouts for a specified purpose.	<i>Content:</i> Events and Actions. Scratch App Writing algorithms and programs that use a range of events to trigger sequences of actions.
		<i>Key Vocabulary:</i> Digital device, input, output, process, program, network switch, server, wireless access point	<i>Key Vocabulary:</i> Animation, flip book, Stop-frame animation, frame, sequence, image, photograph, Setting, character, events, stop-frame animation, onion skinning, consistency, media, import, transition	<i>Key Vocabulary:</i> Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, Sprites, motion, turn, point in direction, go to, glide, Sequence, event, task, design, run the code, order, note, chord, costume, Design, algorithm, bug, debug	<i>Key Vocabulary:</i> Attribute, value, questions, table, objects, branching database, database, attribute, value, questions, objects, equal, even, separate, structure, compare, order, organise, j2data, selecting, pictogram, compare, information, decision tree	<i>Key Vocabulary:</i> Text, images, advantages, disadvantages, communicate, Font, font style, communicate, template, Landscape, portrait, orientation, placeholder, template, layout, content, Desktop publishing, copy, paste, Layout, purpose, benefits	<i>Key Vocabulary:</i> Motion, event, sprite, algorithm, logic, Move, resize, algorithm, Extension block, pen up, set up, Pen, design, event, action, Debugging, errors, setup, Design, code, setup, test, debug, actions, events
		Online Safety: Be Internet Legends: Lesson 1 Sharp & Alert: Online Reputation	Online Safety: Play Like Share: Ep. 1 Block Him Right Good, Alfie!	Online Safety: Safer Internet Day: Feb 6th 2024 Theme: inspiring positive change online, challenging pupils to complete five interactive tasks together ” (Google assembly.)	Online Safety: Play Like Share: Ep. 2 Who’s Magnus?	Online Safety: Play Like Share: Ep. 3	Online Safety: Play Like Share: Extension Activity 2 & 3
	Year 4	<i>Content:</i> The Internet. Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.	<i>Content:</i> Audio Editing. Laptop: Audacity Link to English – Podcast on discussion text – Should Rama have been banished from the castle? Capturing and editing audio to produce a podcast, ensuring that copyright is considered.	<i>Content:</i> Repetition in Shapes. Laptop: Logo – Text based programming Link to Maths - Shapes Using a text-based programming language to explore count-controlled loops when drawing shapes.	<i>Content:</i> Data Logging. TTS Data Logger- Log Box data logger Link to Science – Fair test Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	<i>Content:</i> Photo Editing. Paint.net/BeFunky app Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.	<i>Content:</i> Repetition in Games. Scratch Using a block-based programming language to explore count-controlled and infinite loops when creating a game.
		<i>Key Vocabulary:</i> Internet, network, router, network security, network switch, wireless access point, server, Website, web page, web address, router, routing, route tracing, browser, save, file, edit, selection, open, save, file, use, content, download, sharing, ownership, permission, Information, accurate, honest, content, advert, World Wide Web, internet, content, website, web page, links, files	<i>Key Vocabulary:</i> Audio, record, playback, microphone, speaker, headphones, input, output, sound, start, pause, stop, podcast, save, file, edit, selection, open, save, file, mixing, time shift, Export, MP3, audio, editing, evaluate, feedback	<i>Key Vocabulary:</i> Program, Turtle, Commands, Code snippet, Algorithm, Design, Debug, Logo commands, Pattern, repeat, repetition, count-controlled loop, , value, Decompose, Procedure, program	<i>Key Vocabulary:</i> Data, table (layout), Input device, sensor, data logger, logging, data point, interval, Analyse, data set, import, export, logged, collection, Analyse, review, conclusion	<i>Key Vocabulary:</i> Image, edit, arrange, select, digital, crop, undo, save, search, copyright, composition, edit, save, pixels, crop, rotate, flip, adjustments, effects, colours, hue/saturation, sepia, version, illustrator, vignette, edit, retouch, clone, recolour, magic wand, select, adjust, sharpen, brighten, Image, fake, real, composite, cut, copy, paste, alter, background, foreground, publication, elements, original, font style, shapes, border, layer.	<i>Key Vocabulary:</i> Scratch, programming, sprite, blocks, code, loop, repeat, value, Block, repeat, forever, infinite loop, count-controlled loop, costume, Repetition, forever, infinite loop, count-controlled loop, animate, event block, duplicate, modify, design, algorithm, duplicate, debug, refine, evaluate

		Online Safety: Be Internet Legends: Lesson 2 Secure & Kind	Online Safety: Be Internet Legends: Lesson 3 Sharp & Alert : Opinions & Differences	Online Safety: Safer Internet Day: Feb 6th 2024 Theme: inspiring positive change online, challenging pupils to complete five interactive tasks together ” (Google assembly.)	Online Safety: Be Internet Legends: Lesson 4 Secure & Kind:	Online Safety: Be Internet Legends: Lesson 6 Brave: Speak Up & Report It	Online Safety: Be Internet Legends: Digital Wellbeing (9-11) Lesson 1: Screen time & our Wellbeing
	Year 5	Content: Sharing Information. Identifying and exploring how information is shared between digital systems.	Content: Video Editing. App: Camera Film Making project RichMix Theatre Planning, capturing, and editing video to produce a short film.	Content: Selection in Physical Computing. App: Crumble Controllers – Physical Computing – concept of selection in programming Link to DT Exploring conditions and selection using a programmable microcontroller.	Content: Flat-file Databases. j2data sample Expedia Link to Science - Research Using a database to order data and create charts to answer questions.	Content: Vector Drawing. Google Drawings Link to Science – Creating animals in biomes Creating images in a drawing program by using layers and groups of objects.	Content: Selection in Quizzes. Scratch Exploring selection in programming to design and code an interactive quiz.
		Key Vocabulary: World Wide Web, internet, content, website, web page, links, files, System, connection, digital, input, process, output, Protocol, address, packet, Chat, explore, slide deck, Chat, explore, Reuse, remix, collaboration.	Key Vocabulary: Video, audio, recording, storyboard, script, soundtrack, dialogue, capture, zoom, storage, digital, tape, Video, audio, AV (audiovisual), recording, save, videographer, Video techniques: Zoom, pan, tilt, angle, lighting, setting, YouTube, content, light, audio/sound, camera angle, colour, Export, computer, Microsoft Movie Maker, split, trim/clip, edit, titles, end credits, timeline, transitions, audio, soundtrack, content, retake/reshoot (choose agreed language), Video, special effects, title screen, end credits, export, constructive feedback	Key Vocabulary: Microcontroller, components, connection, infinite loop, output component, motor, repetition, count-controlled loop, Crumble controller, switch, motor, LED, Sparkle, crocodile clips, connect, battery box, program, condition, Input, output, selection, condition, action, debug	Key Vocabulary: Database, data, information, record, field, sort, order, group, search, order, value, search, criteria, graph, chart, axis, compare, filter, chart, presentation	Key Vocabulary: Vector, drawing tools, shapes, object, icons, toolbar, object, move, resize, colour, rotate, duplicate/copy, Organise, zoom, select, rotate, object, alignment grid, resize, handles, consistency, modify, Layers, object, front, back, order, Copy, paste, group, ungroup, duplicate, object, vector drawing, reuse, Improvement, evaluate, alternatives, vector drawing	Key Vocabulary: Selection, condition, true, false, count-controlled loop, outcomes, conditional statement (the linking together of a condition and outcomes), algorithm, program, debug, Selection, condition, true, false, outcomes, question, answer, Task, design, input, program, selection, condition, Implement, design, test, run, debug, setup, selection, condition, outcome, share, evaluate, constructive
		Online Safety: Be Internet Legends: Lesson 7 Sharp : Positive Digital Footprint	Online Safety: Be Internet Legends: Lesson 8 Alert : Spotting Fake Info	Online Safety: Safer Internet Day: Feb 6th 2024 Theme: inspiring positive change online, challenging pupils to complete five interactive tasks together ” (Google assembly.)	Online Safety: Be Internet Legends: Lesson 9 Secure : Sharing, Settings & Passwords	Online Safety: Livestreaming: L1 Positive vs. Unhealthy attention	Online Safety: Livestreaming: L2 Self-esteem
	Year 6	Content: Communication. Recognising how the WWW can be used to communicate and be searched to find information.	Content: Webpage Creation. Website: Google Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.	Content: Variables in Games. Website: Scratch Exploring variables when designing and coding a game.	Content: Introduction to Spreadsheets. Microsoft Excel Answering questions by using spreadsheets to organise and calculate data.	Content: 3D Modelling. Tinkercad Link to DT Planning, developing, and evaluating 3D computer models of physical objects.	Content: Sensing. Microbit and MakeCode Link to DT Designing and coding a project that captures inputs from a physical device.

		Key Vocabulary: Search, search engine, Google, Bing, Yahoo!, Swisscows, DuckDuckGo, refine, Index, crawler, bot, search engine, Ranking, search engine optimisation, links, web crawlers, Internet, Searching, content creator, selection, ranking, Communication, public, private, one-way, two-way, one-to-one, one-to-many, SMS, email, WhatsApp, blog, YouTube, Twitter, BBC Newsround	Key Vocabulary: Website, web page, browser, media, Hypertext Markup Language (HTML), website, logo, layout, header, media, purpose, Copyright, fair use, home page, preview, evaluate, device, Google Sites, breadcrumb trail, navigation, hyperlink, subpage, evaluate, implication, external link, embed	Key Vocabulary: Variable, change, name, value, set, change, design, event, algorithm, code, Task, artwork, program, project, code, test, debug, Improve, evaluate, share	Key Vocabulary: Spreadsheet, data, data heading, data set, cells, columns and rows, data item, data set, object, spreadsheet application, format, common attribute, Formula, calculation, data, spreadsheet, input, output, cells, cell reference, calculate, operation, formula, cell, range, duplicate, sigma, Propose, question, organised, Graph, chart, evaluate, results, comparison, questions, software, tools,	Key Vocabulary: 2D, 3D, 3D object, 3D space, view, resize, colour, lift, Rotate, position, select, duplicate, Dimensions, placeholder, hole, group, ungroup, Resize, design, Modify, evaluate, improve	Key Vocabulary: Micro:bit, MakeCode, input, process, output, flashing, USB, Selection, condition, if then else, variable, random, Input, selection, condition, variable, sensing, accelerometer, Compass, direction, variable, navigation, Micro:bit, design, task, algorithm, variable, step counter, Plan, create, code, test, debug
		Online Safety: Be Internet Legends: Lesson 10 Kind: Relationships & Being Kind	Online Safety: Be Internet Legends: Lesson 11 Brave: Refusing & Reporting	Online Safety: Safer Internet Day: Feb 6th 2024 Theme: inspiring positive change online, challenging pupils to complete five interactive tasks together “ (Google assembly.)	Online Safety: Be Internet Legends: Lesson 12 Brave: Handling & Reporting Mean Behaviour	Online safety: Be Internet Legends: Digital Wellbeing (9-11)Lesson 2: Healthy Habits	Online Safety: ParentZone Secondary Assembly

Concepts Throughout KS1 and KS2, the following elements of computing (and associated vocabulary) are taught.

This knowledge is built upon each year.

NW Networks Understand how networks can be used to retrieve and share information and come with associated risks.

CM Creating Media Select and create a range of media including text, images, sounds and video.

DI Data & Information How is data stored, organised, and used to represent real world artefacts and scenarios

DD Design & Development. The activities involved in planning, creating, and evaluating computing artefacts

CS Computing Systems What is a computer, how do its constituent parts function together as a whole IT Impact of Technology How individuals, systems and out wider society interact with computer systems

AL Algorithms Being able to comprehend, design, create and evaluate algorithms

PG Programming Creating software to allow computers to solve problems ET Effective Use of tools Use software tools to support computing work

SS Safety & Security Understanding risks when using technology and how to protect individuals and systems