Computing - Curriculum Overview

Year	Subject specific Vocabulary	'The Greats'	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery			**Understanding the World:** Technology • Knows how to operate simple equipment, e.g. turns on CD player, uses a remote control, can navigate touch-capable technology with support • Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets • Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images • Knows that information can be retrieved from digital devices and the internet • Plays with a range of materials to learn cause and effect, for example, makes a string puppet using dowels and string to suspend the puppet				
Reception	Ipad Computer Photo Video Internet Type Keyboard Mouse Screen Phone Whiteboard		**Understanding the World:** Technology • Completes a simple program on electronic devices • Uses ICT hardware to interact with age appropriate computer software • Can create content such as a video recording, stories, and/or draw a picture on screen • Develops digital literacy skills by being able to access, understand and interact with a range of technologies • Can use the internet with adult supervision to find and retrieve information of interest to them				

Key stage 1

Pupils should be taught 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
- 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.

Key stage 2

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- 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
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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
- use technology safely, respectfully and responsibly; recognize acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Year 1	Instructions, algorithm, sequenced, ordered, step-by-step, clockwise, anti-clockwise, quarter turn, program, debug, direct, clear, sequence Trackpad, click, double click, launch, minimize, taskbar, folder, save, save as, Uppercase, lowercase, Caps lock, shift, space bar, save, icon, edit, backspace, delete, arrow keys, undo, redo Brush, select, cursor, drag, hold, fill, shape, undo, redo, text, insert, format, share Search, internet, key word	Walt Disney	**Programing - Programming toys** -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. -look at household technology- -recognise common uses of information technology beyond school.	**Computer Skills** -use the trackpad, switch on/off, save -use technology purposefully to create, organise, store, manipulate and retrieve digital content	**Word -** -put text on screen -use upper and lower case -use the space bar -use the Shift -use Caps lock -use undo and redo -use technology purposefully to create, organise, store, manipulate and retrieve digital content	**Graphics and Design - Paint** -Basic skills, brush, fill, shapes -use technology purposefully to create, organise, store, manipulate and retrieve digital content	**Internet Research** -Key word search -use technology purposefully to create, organise, store, manipulate and retrieve digital content **Presentation-Word, Publisher, PowerPoint** -Create information document- famous people -use technology purposefully to create, organise, store, manipulate and retrieve digital content

| Year 2 | Information, presentation, insert, font, copy, paste,

Fill, colour, tool bar, computer program, shape tool,

Code, instructions, program, algorithm,

Undo, redo, select, bold, highlight, italic, drag, underline, font, size, snipping tool, print screen, copy, paste

Program, code, script, algorithm, repeat, event, variable, commands,

Search, internet, key word | Nick Park | **Presentation- PowerPoint**

-Basic skills, insert slides, copy and paste pictures

-use technology purposefully to create, organise, store, manipulate and retrieve digital content | **Graphics and Design – Paint**

-create work from other artists

-use technology purposefully to create, organise, store, manipulate and retrieve digital content | **Programming - Logo**

-Basic shapes

-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 | **Word**

-know that text can be saved and retrieved
-change the font style
-change the font size
-change the font colour
-print their work using the Print icon
-use the cursor (arrow) keys for simple on screen editing
-with support, import graphics and add text

-use technology purposefully to create, organise, store, manipulate and retrieve digital content | **Programming Scratch**

-Beginning with basics, adding a sprite, moving a sprite,

-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 | **Internet Research**

-search terms for children

-use technology purposefully to create, organise, store, manipulate and retrieve digital content

Presentation- Word, Publisher, PowerPoint

-create information document- famous people

-use technology purposefully to create, organise, store, manipulate and retrieve digital content |
| **Year 3** | Copy, paste, insert, font, solid fill, background

Computer program, fill, shade, shade, retrieve, file, save, | Larry Page | **Presentation - Powerpoint**

-format and design slides/backgrounds | **Graphics and Design –Paint**

-new tools | **Programming - Logo**

-pen up/pen down | **Word**

-select text and change the font style, size and colour | **Programming - Scratch**

-more complex scripts | **Internet research and communication**

-Search results

-understand computer networks including the |

save as, transparent colour, Repeat, program, code, algorithm, debug, regular, angle Screenshot, manipulating windows, copy, paste, uppercase, lowercase, align, bullet points, numbering, shortcut, select, text Create, command, algorithm, polygon, debugging, repeating pattern, Web search, search engine, order		-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	-using and manipulating objects -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	-design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -use sequence, selection, and repetition in programs; work with variables and various forms of input and output -use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	-select text and use Bold and Underline icons -use the scroll bars to view different parts of the document justify / align text -import graphics and add text -print using the menu -use print preview -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	-design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -use sequence, selection, and repetition in programs; work with variables and various forms of input and output -use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration -use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content **Presentation – Word, Publisher, PowerPoint** -create information document- famous people -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
Year 4	Slide, insert, font, background, solid fill, gradient fill

Animation, frame, scene,

Procedure, algorithm, code, setpos, coordinates, random, fill, repeat

Edit, copyright, format, table, inset, column, row, cell, layout, orientation, portrait, landscape,

Visual, decomposing, algorithm, debugging, sequence, selection, effective, sprite, repetition, commands, variable, sounds library, assign, numerical values, | **Bill Gates** | **Presentation – PowerPoint**

-inserting web links
-backgrounds

-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 | **Graphics and design**

-pivot Animation

-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 | **Programming – Logo**

-repeat, pen colour

-design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

-use sequence, selection, and repetition in programs; work with variables and various forms of input and output

-use logical reasoning to explain how | **Word**

-import graphics (position and align
-use the spell checker
-use Find, search and replace if appropriate
-use Page Setup to choose Portrait or Landscape page as appropriate
-learn how to insert and use a simple table
-use the Zoom menu to view the whole page

-select, use and combine a variety of software (including internet services) on a range of digital devices to | **Programming – Scratch**

-questions and quizzes

-design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

-use sequence, selection, and repetition in programs; work with variables and various forms of input and output

-use logical reasoning to explain how some simple algorithms work and to detect and correct errors in | **Internet research and communication**

-order of returned results

-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

-use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

Presentation – Word, Publisher, PowerPoint |

	Vocabulary	Famous Person						
	positive, negative, appropriate, Returned results, trustworthy, spam, rank, URL				some simple algorithms work and to detect and correct errors in algorithms and programs	design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	algorithms and programs	-create information document- famous people -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
Year 5	Design, background, Design, architectural designs, interior designs, landscape, Computer program, 3D, Input, output, record, skip to start, skip to end, playback, jingle, podcast, download, advert/advertising, present, evaluate,	**Steve Jobs**	**Presentation - PowerPoint** -practise skills, hyperlinks, actions, transitions -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	**Graphics and design** -sketch up -select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of	**Radio stations** -create and import sounds. -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	**Publisher** -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	**Programming - Scratch** – create own video game -design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	**Internet research and Communication** -design own web page -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

	Insert, document, open, text box, font, align, Sprite, backdrop, trigger, action, effects, consequence, obstacle, code, costume, duplicate, variable, debug, Bookmarks, favourites		collecting, analysing, evaluating and presenting data and information	programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	collecting, analysing, evaluating and presenting data and information	-use sequence, selection, and repetition in programs; work with variables and various forms of input and output -use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	-use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content **Presentation - Word, Publisher, PowerPoint** -create information document- famous people -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

| Year 6 | Hyperlink, link, transition, animation, action

Animation, frame, scene, stop motion

Icon, visual programming, investigate, code, instructions, genre, virtual world, tool pallet, deconstruct, end goal, start point, end point, program design, compete, automatically controlled,

Spreadsheet, format, cell, formula, calculate, toolbar, axis, conditional,

Animate, sprite, repeat, broadcast, receive, reflected, horizontal, code, deconstruct, sequence, backdrop, transition, audio, enhance, interactive, | Mark Zuckerberg | **Presentation - PowerPoint**

-transitions, animation, links, actions

-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 | **Graphics and design**
-stop motion

-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 | **Programming - Kodu**

-create own world/game

-design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

-use sequence, selection, and repetition in programs; work with variables and various forms of input and output

-use logical reasoning to explain how some simple algorithms work and to detect and correct errors in | **Excel**

-spreadsheets

-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 | **Programming - Scratch**

-animated stories

-design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

-use sequence, selection, and repetition in programs; work with variables and various forms of input and output

-use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs | **Internet research and communication**

-communication online

-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

-use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

Presentation - Word, Publisher, PowerPoint

-create information document- famous people

-select, use and combine a variety of |
|---|---|---|---|---|---|---|---|

	Online commination, Online audience, posting				algorithms and programs		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