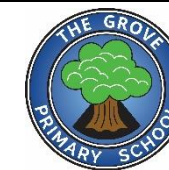


The Grove Computing Curriculum 2025

(Teach Computing)



	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
End points	Substantive Knowledge Key – Specific additional Grove Strands of learning. Additional Online Safety						
Understanding computing systems and networks	- To recognise that technology is not just 'in the classroom' -To know that digital devices connect to the internet. -To understand how technology can be used to communicate.	-To identify technology -To identify a computer and its main parts - To know what a username is. - To know what a password is. - To log onto a computer. -To use a mouse in different ways -To use a keyboard to type on a computer -To use the keyboard to edit text -To create rules for using technology responsibly	-To recognise the uses and features of information technology - To log onto a computer and use a program. -To identify the uses of information technology in the school -To explain how information technology helps us -To explain how to use information technology safely -To recognise that choices are made when using information technology	-To log on to a computer and save a piece of work. -To explain how digital devices function -To identify input and output devices -To recognise how digital devices can change the way we work -To explore how digital devices can be connected	-To describe how networks physically connect to other networks -To recognise how networked devices make up the internet -To recognise how the content of the WWW is created by people -To evaluate the consequences of unreliable content	-To explain that computers can be connected together to form systems -To experiment with search engines -To describe how search engines select results Larger emphasis on online safety for this unit.	-To explain the importance of internet addresses -To recognise how data is transferred across the internet -To recognise how we communicate using technology Larger emphasis on online safety for this unit.
Vocabulary for unit		technology, computer, mouse, trackpad, keyboard, screen, click, drag, input device, shift, spacebar, capital letter, full stop, safely, responsibly	Information technology (IT), computer, barcode, scanner/scan	Digital device, input, output, process, program, connection, network, network switch, server, wireless access point (WAP)	Internet, network, router, network security, network switch, wireless access point (WAP), router, website, web page, web address, router, routing, route tracing, browser, World Wide Web, content, links, files, use, download, sharing, ownership, permission, accurate, honest, adverts	System, connection, digital, input, process, output, protocol, address, packet, chat, explore, slide deck, reuse, remix, collaboration	Search, search engine, Google, Bing, Yahoo, Swisscows, DuckDuckGo, refine, index, crawler, bot, optimisation, links, web crawlers, content creator, ranking, communication, internet, public, private, one-way, two-way, one-to-one, one-to-many, SMS, email, WhatsApp, blog, YouTube, Twitter, BBC Newsround
To create media	-To work with shapes. -To work with text. -To work with video. -To work with sound. -To use a keyboard and its functions. -To use features of programmes to add effects to images and text. -Use devices to capture still images	-To describe what different freehand tools do -To use the shape tool and the line tools -To make careful choices when painting a digital picture -To explain why I chose the tools I used -To use a computer on my own to paint a picture -To compare painting a picture on a computer and on paper -To use a computer to write -To add and remove text on a computer -To identify that the look of text can be changed on a computer	-To use a digital device to take a photograph -To make choices when taking a photograph -To describe what makes a good photograph -To decide how photographs can be improved -To use tools to change an image -To recognise that photos can be changed	-To explain that animation is a sequence of drawings or photographs -To relate animated movement with a sequence of images -To plan an animation -To identify the need to work consistently and carefully -To review and improve an animation -To evaluate the impact of adding other media to an animation -To recognise how text and images convey information -To recognise that text and layout can be edited -To choose appropriate page settings	-To explain that the composition of digital images can be changed -To explain that colours can be changed in digital images -To explain how cloning can be used in photo editing -To explain that images can be combined -To combine images for a purpose -To evaluate how changes can improve an image	-To identify that drawing tools can be used to produce different outcomes -To create a vector drawing by combining shapes -To explain how alignment grids and resize handles can be used to improve consistency -To recognise that vector drawings consist of layers -To group objects to make them easier to work with -To apply what I have learned about vector drawings	-To review an existing website and consider its structure -To plan the features of a web page -To consider the ownership and use of images (copyright) -To recognise the need to preview pages -To outline the need for a navigation path -To recognise the implications of linking to content owned by other people -To recognise that you can work in three dimensions on a computer

		-To make careful choices when changing text -To explain why I used the tools that I chose -To compare typing on a computer to writing on paper		-To add content to a desktop publishing publication -To consider how different layouts can suit different purposes -To consider the benefits of desktop publishing			-To identify that digital 3D objects can be modified -To recognise that objects can be combined in a 3D model -To create a 3D model for a given purpose -To plan my own 3D model -To create my own digital 3D model
Vocabulary for unit		Paint program, tool, paintbrush, erase, fill, undo, Piet Mondrian, primary colours , shape tools, line tool, fill tool, undo tool, Henri Matisse, Wassily Kandinsky, feelings, colour , brush style, George Seurat, Pointillism, prefer, dislike, like Word processor, keyboard, keys, letters , Microsoft Word, letters, numbers, space, backspace, text cursor, toolbar, bold, italic, underline, undo, font, toolbar	Device, camera, photograph, capture, image, digital, landscape, portrait, horizontal, vertical , field of view, narrow, wide, format, framing, focal point, subject, matter, flash, focus, background, foreground, editing, filter, Pixel, changed, real	Animation, flip book, stop frame, animation, frame, sequence , image, photograph , setting, character, events, onion skinning, consistency , delete, frame, media, import, transition Text, images, advantages, disadvantages, communicate, font, style, template, desktop publishing, copy, paste, layout, purpose, benefits	Image, edit, arrange, select, digital, crop, undo, save, search, copyright, composition, save, pixels, rotate, flip , adjustments, effects, colours , hue/saturation, sepia, version, illustrator, clone, recolour, magic wand, sharpen, brighten, fake, real , composite, background, foreground, retouch, paste, alter, publication, elements, original, font style, border, layer	Vector, drawing tools, shapes, object , icons, toolbar, move , resize, colour, rotate, duplicate/copy, zoom, select , alignment grid, handles, consistency, modify, layers, front, back, copy, paste, group, ungroup, reuse, improvement, evaluate, alternatives	Website, web page, browser, media, Hypertext Markup Language (HTML), layout, header, media, purpose , copyright, fair use, evaluate, preview , device, breadcrumb, trail, navigation, hyperlink, subpage, implication, external link, embed 2D, 3D, 3D object, 3D space , view, resize, colour, lift, rotate, position, select, duplicate, dimensions, placeholder, hole , group, ungroup, modify, evaluate, improve
Data and Information	-To understand that data is a collection of collected and digital information. -To interpret and talk about collected data.	-To label objects - To label objects -To describe objects in different ways -To count objects with the same properties -To compare groups of objects -To answer questions about groups of objects	-To recognise that we can count and compare objects using tally charts -To recognise that objects can be represented as pictures -To create a pictogram -To select objects by attribute and make comparisons -To recognise that people can be described by attributes -To explain that we can present information using a computer	-To create questions with yes/no answers -To identify the attributes needed to collect data about an object -To create a branching database -To explain why it is helpful for a database to be well structured -To plan the structure of a branching database -To independently create an identification tool	-To explain that data gathered over time can be used to answer questions -To use a digital device to collect data automatically -To explain that a data logger collects 'data points' from sensors over time -To recognise how a computer can help us analyse data -To identify the data needed to answer questions -To use data from sensors to answer questions	-To use a form to record information -To compare paper and computer-based databases -To outline how you can answer questions by grouping and then sorting data -To explain that tools can be used to select specific data -To explain that computer programs can be used to compare data visually -To use a real-world database to answer questions	-To create a data set in a spreadsheet -To build a data set in a spreadsheet -To explain that formulas can be used to produce calculated data -To apply formulas to data -To create a spreadsheet to plan an event -To choose suitable ways to present data
Vocabulary for unit		Object, label, group, search, image, colour, shape, property, value, data set, less, most, fewest, the same	More than, less than, most, least, organise, data, object, tally chart, votes, total, pictogram, enter, data, tally chart, compare, count, explain, attribute, group, same, different, most popular, least popular	Attribute, value, questions, table, objects, branching databases, objects, equal, even , separate, order, organise, j2data, selecting, pictogram, information, decision tree, questions	Data, table (layout), input device, sensor, data logger, logging, data point, interval, analyse, import, export, logged, collection, analyse, review, conclusion	Database, data, information, record, field, sort, order , group, search, criteria, value, graph, chart, axis, compare, filter, presentation	Spreadsheet, data, data heading, data set, cells, columns and rows , data item, format, common attribute, formula, calculation, call reference, sigma, graph , evaluate, results, comparisons, questions, software, tools, data, propose
Programming - A	-To know that computer functions work from a series of instructions. -To understand that algorithms are a series of instructions to reach a desired outcome.	-To explain what a given command will do -To act out a given word -To combine forwards and backwards commands to make a sequence	-To describe a series of instructions as a sequence -To explain what happens when we change the order of instructions -To use logical reasoning to predict the outcome of a program	-To explore a new programming environment -To identify that commands have an outcome -To explain that a program has a start	-To identify that accuracy in programming is important -To create a program in a text-based language -To explain what 'repeat' means	-To control a simple circuit connected to a computer -To write a program that includes count-controlled loops -To explain that a loop can stop when a condition is met	-To define a 'variable' as something that is changeable -To explain why a variable is used in a program -To choose how to improve a game by using variables -To design a project that builds on a given example

	-To write algorithms (instructions) for a programme or robot to follow. -To use a variety of tools/equipment to create a programme. -To write a sequence of instructions (a programme) to solve a problem or a desired outcome.	-To combine four direction commands to make sequences -To plan a simple program -To find more than one solution to a problem	-To explain that programming projects can have code and artwork -To design an algorithm -To create and debug a program that I have written	-To recognise that a sequence of commands can have an order -To change the appearance of my project -To create a project from a task description	-To modify a count-controlled loop to produce a given outcome -To decompose a task into small steps -To create a program that uses count-controlled loops to produce a given outcome	-To explain that a loop can be used to repeatedly check whether a condition has been met -To design a physical project that includes selection -To create a program that controls a physical computing project	-To use my design to create a project -To evaluate my project
Vocabulary for unit		Forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, plan, algorithm, route, program	Instruction, sequence, clear, unambiguous, algorithm, program, order, commands, prediction, artwork, design, route, mat, debugging	Scratch, programming, blocks, commands, code, sprite, costume , stage, backdrop, motion, turn, point in direction, go to , glide, event, task, design , code, run the code, order, note , chord , algorithm, bug, debug	Program, turtle, commands, code, snippet, algorithm, design, debug, logo commands, pattern, repeat, repetition, count-controlled loop, value, decompose, procedure	Micro:Bit, USB, USB lead, display, LED, function connect, battery box, program, repetition, infinite loop, count-controlled loop, condition, true, false, input, action, selection, algorithm, debug, evaluate	Micro:Bit, USB, USB lead, display, LED, function connect, battery box, program, repetition, infinite loop, count-controlled loop, condition, true, false, input, action, selection, algorithm, debug, evaluate
Programming - B		-To choose a command for a given purpose -To show that a series of commands can be joined together -To identify the effect of changing a value -To explain that each sprite has its own instructions -To design the parts of a project -To use my algorithm to create a program	-To explain that a sequence of commands has a start -To explain that a sequence of commands has an outcome -To create a program using a given design -To change a given design -To create a program using my own design -To decide how my project can be improved	-To explain how a sprite moves in an existing project -To create a program to move a sprite in four directions -To adapt a program to a new context -To develop my program by adding features -To identify and fix bugs in a program -To design and create a maze-based challenge	-To develop the use of count-controlled loops in a different programming environment -To explain that in programming there are infinite loops and count controlled loops -To develop a design that includes two or more loops which run at the same time -To modify an infinite loop in a given program -To design a project that includes repetition -To create a project that includes repetition	-To explain how selection is used in computer programs -To relate that a conditional statement connects a condition to an outcome -To explain how selection directs the flow of a program -To design a program which uses selection -To create a program which uses selection -To evaluate my program	-To create a program to run on a controllable device -To explain that selection can control the flow of a program -To update a variable with a user input -To use a conditional statement to compare a variable to a value -To design a project that uses inputs and outputs on a controllable device -To develop a program to use inputs and outputs on a controllable device
Vocabulary for unit		ScratchJr, Bee-Bot, command, sprite, compare , programming, programming area, block, joining, start, program, background, delete, reset, algorithm, predict, effect, change, value, block, instructions, appropriate, design	Sequence, command, program, run, program, start, predict, blocks, actions, sprite, modify, match, debug, features, evaluate	Motion, event, sprite, algorithm, logic, move, resize, algorithm, extension block, pen up, set up, design , action, debugging, errors, setup, test	Scratch, programming, sprite, blocks, code, loop, repeat, value, forever, infinite loop, count-controlled loop, animate, costume, event block, duplicate, modify, debug, refine, evaluate, algorithm	Selection , condition, true, false, count-controlled loop, outcomes, conditional statement, algorithm, program, debug, implement, question , answer , task , input, outcomes, test, run, setup, share , evaluate, constructive	Micro-bit, MakeCode, input, process, output, flashing , USB, selection, condition, if... then... else, variable, random, navigation, design, task, step counter, plan, create, code, test, debug

Year Overview

Computing Year Overview	
EYFS	EYFS - Computing – Daily activities – Vocab (Technology, share, create, Internet) - Helping the teacher switch on light table - Switching on IWBs - Switch off equipment - Pretend Laptops and phones in Home Corners - Real laptops in the classroom (Term 5 onwards) - Regular Access to iPads. - Pressing play on the screen etc. - Using IWB in CP in Maths

Year 1	Term 1/2	Term 3	Term 4/5	Term 6
	Computing Systems and Networks Systems and Searching Online safety focus Data and information Flat file databases	Programming A Selection in physical computing Programming A Moving a robot	Creating Media Introduction to vector graphics	Programming B Selection in quizzes
	Online Safety: <i>Health, wellbeing and lifestyle</i>	Online Safety: <i>Online relationships</i> <i>Online bullying</i>	Online Safety: <i>Online reputation</i> <i>Self-image & identity</i>	Online Safety: <i>Privacy and security</i> <i>Managing online information</i>

Year 2	Term 1	Term 2/3	Term 4/5	Term 6
	Computing Systems and Networks IT networks Logging on and using a program	Creating Media Digital photography Programming A Robot algorithms	Data and information Pictograms	Programming B Programming
	Online Safety: <i>Health, wellbeing and lifestyle</i>	Online Safety: <i>Online Bullying & Online Relationships</i>	Online Safety: <i>Privacy and Security & Self-Image</i>	Online Safety: <i>Managing Online Information</i>

Year 3	Term 1	Term 2/3	Term 4/5	Term 6
	Computing Systems and Networks Connecting Computers Logging on and saving a document	Creating Media Stop Frame Animations Data and information Branching Databases	Creating Media Desktop Publishing	Programming B Events and actions in programs
	Online Safety: <i>Online Bullying</i> <i>Online Relationships</i>	Online Safety: <i>Managing Online Information</i> <i>Privacy and Security</i>	Online Safety: <i>Health, Wellbeing and Lifestyle</i> <i>Self-Image</i>	Online Safety: <i>Copyright & Ownership</i>

Year 4	Term 1	Term 2/3	Term 4/5	Term 6
	Computing Systems and Networks <i>The Internet</i> <i>Logging on, saving and editing a document</i>	Programming A <i>Repetition in shapes</i> Data and information <i>Data Logging</i>	Creating Media <i>Photo Editing</i>	Programming B <i>Repetition in games</i>
	Online Safety: <i>Self-image & identity</i>	Online Safety: <i>Online relationships</i> <i>Online reputation</i>	Online Safety: <i>Online bullying</i> <i>Health, wellbeing & lifestyle</i>	Online Safety: <i>Privacy & security</i> <i>Copyright & ownership</i>

Year 5	Term 1	Term 2/3	Term 4/5	Term 6
	Computing Systems and Networks <i>Technology around us</i> <i>Logging on to a computer</i>	Creating Media <i>Digital painting</i>	Data and information <i>Grouping data</i> Creating Media <i>Digital writing</i>	Programming B <i>Programming animations</i>
	Online Safety: <i>Self-image & identity</i> <i>Privacy & security</i>	Online Safety: <i>Health, wellbeing & lifestyle</i>	Online Safety: <i>Online reputation</i> <i>Online bullying</i>	Online Safety: <i>Copyright & ownership</i>

Year 6	Term 1	Term 2/3	Term 4/5	Term 6
	Computing Systems and Networks <i>Communication and collaboration</i> <i>Online safety focus</i>	Creating Media <i>Web page creation</i>	Data and information <i>Introduction to spreadsheets</i> Programming A <i>Variables in games</i>	Creating Media <i>3D Modelling</i>
	Online Safety: <i>Online relationships</i> <i>Online reputation</i>	Online Safety: <i>Privacy & security</i> <i>Copyright & ownership</i>	Online Safety: <i>Health, wellbeing & lifestyle</i> <i>Online bullying</i>	Online Safety: <i>Self-image & identity</i>

National Curriculum links for each unit

Year 1 and 2

National Curriculum Objectives	1.1 Technology around us	1.2 Digital painting	1.3 Moving a robot	1.4 Grouping data	1.5 Digital writing	1.6 Programming animations	2.1 Information technology around us	2.2 Digital photography	2.3 Robot algorithms	2.4 Pictograms	2.5 Digital music	2.6 Programming quizzes
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	*			*	*		*	*	*	*		

National Curriculum links for each unit

Year 3 and 4

National Curriculum Objectives	3.1 Connecting computers	3.2 Stop-frame animation	3.3 Sequencing sounds	3.4 Branching databases	3.5 Desktop publishing	3.6 Events and actions in programs	4.1 The internet	4.2 Audio production	4.3 Repetition in shapes	4.4 Data logging	4.5 Photo editing	4.6 Repetition in games
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; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		*		*			*	*			*	

National Curriculum links for each unit

Year 5 and 6

National Curriculum Objectives	5.1 Systems and searching	5.2 Video production	5.3 Selection in physical computing	5.4 Flat-file databases	5.5 Introduction to vector graphics	5.6 Selection in quizzes	6.1 Communication and	6.2 Webpage creation	6.3 Variables in games	6.4 Introduction to spreadsheets	6.5 3D modelling	6.6 Sensing movements
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; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	*	*						*	*		*	