

		Key Stage One					
Year		Online Safety	Digital Literacy	Programming A	Programming B	Networks and Communication	Data and Information
1	Programme of study	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. 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 vocabulary	online, trusted adult, permission, search engines, passwords, personal information, device.	Word processor, keyboard, keys, undo, backspace, toolbar, bold, italic, underline, Microsoft Word, Google Docs, select, cursor, font.	Forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, plan, algorithm.	ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area, algorithm, design, programming blocks.	Technology, computer, mouse/trackpad, keyboard, screen, click, drag, input device, mouse, shift, space bar, capital letter, full stop, safely, responsibly.	Label, search, image, group, shape, object, property, value, colour, data set, more, less, most, least, fewest, the same
	Key knowledge	To know when and how to speak to an adult I can trust and how they can help. To recognise when I should ask permission to do something online and explain why this is important. To recognise what information should not be put online without asking a trusted adult first. To describe how to behave online in ways that do not upset others and can give examples. To how to find information using digital technologies, e.g. search engines, voice activated searching. To explain how passwords are used to protect personal information, accounts and devices.	To know how to use computer to write. To know how to add and remove text on a computer. To know that the look of text can be changed 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 explain what a given command will do. To act out a given word. To combine forwards and backwards commands to make a sequence. To combine four direction commands to make sequences. To plan a simple program. To find more than one solution to a problem.	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 identify technology. To identify a computer and its main parts. To know how 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 label objects. To identify that objects can be counted. 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.
	Programme of study	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. 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.

2	Key vocabulary	Online, offline, communicate, stranger, webpage, personal information, private, copyright, passwords.	Device, camera, photograph, capture, image, digital, landscape, portrait, horizontal, vertical, field of view, narrow, wide, format, natural lighting, artificial lighting, flash, focus, background, foreground, editing, tools, colour, filter.	Instruction, sequence, clear, unambiguous, algorithm, program, order, design, route, debugging.	Sequence, command, program, run, start, sprite, algorithm, blocks, predict, actions, project, blocks, design, modify, change, compare, debug, features, evaluate .	Information technology (IT), computer, barcode, scanner/scan.	More than, less than, most, least, organise, data, object, tally chart, votes, total, Tally chart, data, pictogram, explain, more, less, most, least, more common, least common, Attribute, compare, tally chart, pictogram, more than, less than, most popular, least popular, conclusion
	Key knowledge	To explain how other people may look and act differently online and offline. To know how technology is used to communicate with strangers and explain why this might be risky. To recognise how online information can be seen by others. To recognise what online bullying is and what I can do to help. To demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections). To describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords). To describe why other people's work belongs to them.	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 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 explain that programming projects can have code and artwork. To design an algorithm. To create and debug a program that I have written.	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 recognise the uses and features of information technology. To identify the uses of information technology in the school. To identify information technology beyond 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 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.
Key Stage Two							
		Online Safety	Digital Literacy	Programming A	Programming B	Networks and Communication	Data and Information
	Programme of study	<ul style="list-style-type: none"> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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, 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. 	<ul style="list-style-type: none"> 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, 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. 	<ul style="list-style-type: none"> 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 sequence, selection, and repetition in programs; work with variables and various forms of input and output. 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. 	<ul style="list-style-type: none"> 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.

3	Key vocabulary	Identity, digital footprint, permission, online, offline, personal information, copyright, content.	Text, images, advantages, disadvantages, communicate, font, font style, template, landscape, portrait, orientation, placeholder, desktop publishing, copy, paste, layout.	Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, motion, turn, point in direction, go to, glide, sequence, event, task, design, code, run the code, design, algorithm, bug, debug	Motion, event, sprite, algorithm, logic, move, resize, extension block, pen up, set up, debugging, errors, setup, test.	Digital device, input, output, process, program, connection, network, network switch, server, wireless access point.	Attribute, value, questions, table, objects, branching database, database, equal, even, separate, organise, questions, j2data, pictogram, compare, information, decision tree.
	Key knowledge	To know what is meant by the term 'identity'. To know the importance of giving and gaining permission before sharing things online; how the principles of sharing online is the same as sharing offline. To know how to search for information about others online. To know appropriate ways to behave towards other people online and why this is important. To know why someone should only share information with people they choose to and can trust. To know why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause.	To recognise how text and images convey information. To recognise that text and layout can be edited. To choose appropriate page settings. 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 explore a new programming environment. To identify that commands have an outcome. To explain that a program has a start. 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 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 explain how digital devices function. To identify input and output devices. To recognise how digital devices can change the way we work. To explain how a computer network can be used to share information. To explore how digital devices can be connected. To recognise the physical components of a network.	To know how to create questions with yes/no answers. To identify the object attributes needed to collect relevant data. To know how to create a branching database. To explain why it is helpful for a database to be well structured. To identify objects using a branching database. To compare the information shown in a pictogram with a branching database.
4	Programme of study	<ul style="list-style-type: none"> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. <ul style="list-style-type: none"> 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, 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. 	<ul style="list-style-type: none"> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. <ul style="list-style-type: none"> 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, 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. 	<ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.
	Key vocabulary	Identity, online, offline, social environments, online reputation, fake news, consent, personal information, online content, permission.	Image, edit, arrange, select, digital, undo, save, search, copyright, composition, edit, save, pixels, crop, rotate, flip, adjustments, effects, colours, hue/saturation, sepia, save, version, illustrator, vignette, recolour, magic wand, select, adjust, sharpen, brighten, fake, real, composite, cut, copy, paste, alter, background, foreground, publication, elements, original, font style, shapes, border, layer	Program, turtle, commands, code snippet, algorithm, design, debug. Logo commands, pattern, repeat, repetition, count-controlled loop, value, decompose, procedure, debug.	Scratch, programming, sprite, blocks, code, loop, repeat, value, infinite loop, count-controlled loop, costume, animate, costume, event block, duplicate, design, modify, algorithm, repetition, debug, refine, evaluate	Internet, network, router, network security, server, wireless access point (WAP), website, web page, web address, routing, route tracing, browser, World Wide Web, content, web page, links, files, download, sharing, ownership, permission, information, sharing, accurate, honest, content, adverts .	Data, layout, input device, sensor, data logger, analyse, data set, import, export, review, conclusion.

	Key knowledge	To know how my online identity can be different to my offline identity. To know strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms). To know how to find out information about others by searching online. To know how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation). To know what is meant by fake news. To know how some online services may seek consent to store information. To demonstrate ways of recognising who might own online content.	To explain that digital images can be changed. To change the composition of an image. To describe how images can be changed for different uses. To make good choices when selecting different tools. To recognise that not all images are real. To evaluate how changes can improve an image.	To identify that accuracy in programming is important. To create a program in a text-based language. To explain what 'repeat' means. 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 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 create a project that includes repetition.	To describe how networks physically connect to other networks. To recognise how networked devices make up the internet. To outline how websites can be shared via the World Wide Web (WWW). To describe how content can be added and accessed on the World Wide Web. To recognise how the content of the WWW is created by people. To evaluate the consequences of unreliable content.	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 use data collected over a long duration to find information. To identify the data needed to answer questions. To use collected data to answer questions.
5	Programme of study	<ul style="list-style-type: none"> •Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<ul style="list-style-type: none"> •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. 	<ul style="list-style-type: none"> •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, 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. 	<ul style="list-style-type: none"> •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. 	<ul style="list-style-type: none"> •Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. •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 sequence, selection, and repetition in programs; work with variables and various forms of input and output. •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. 	<ul style="list-style-type: none"> •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.
	Key vocabulary	Online identity, online communities, collaboration, digital footprint, digital content, fake news, app permissions, consent.	Vector, drawing tools, shapes, object, icons, toolbar, move, resize, colour, rotate, duplicate/copy, layers, object, front, back, order, paste, group, ungroup, duplicate, reuse, improvement, evaluate, alternatives,	Microcontroller, Crumble controller, components, LED, Sparkle, crocodile clips, connect, battery box, program, repetition, infinite loop, output devices, selection, condition, action, , motor, LED, Sparkle, switch, algorithm, program, debug, evaluate	Selection, condition, true, false, outcomes, conditional statement - the linking together of a condition and outcomes- algorithm, program, debug, test, setup, Implement, design, algorithm, program, selection, condition, outcome, test, run, debug, evaluate, constructive.	System, connection, digital, input, process, output, protocol, address, packet, chat, explore, slide deck, reuse, remix, collaboration	Database, data, information, record, field, sort, order, group, value, graph, chart, axis, compare, filter, chart, presentation.

	Key knowledge	To know how identity online can be copied, modified or altered. To know ways people may be involved in online communities and describe how they might collaborate constructively. To know ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect. To know how anyone can get help if they are being bullied online and identify when to tell a trusted adult. To evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results. To explain what app permissions are and can give some examples. To know content that is permitted to be reused and know how this content can be found online.	To identify that drawing tools can be used to produce different outcomes. To create a vector drawing by combining shapes. To use tools to achieve a desired effect. 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 know how 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 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 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 explain that computers can be connected together to form systems. To recognise the role of computer systems in our lives. To recognise how information is transferred over the internet. To explain how sharing information online lets people in different places work together. To know how to contribute to a shared project online. To evaluate different ways of working together online.	To know how to use a form to record information. To compare paper and computer-based databases. To outline how grouping and then sorting data allows us to answer questions. To explain that tools can be used to select specific data. To explain that computer programs can be used to compare data visually. To apply my knowledge of a database to ask and answer real-world questions.
6	Programme of study	<ul style="list-style-type: none"> •Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<ul style="list-style-type: none"> •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. 	<ul style="list-style-type: none"> •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, 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. 	<ul style="list-style-type: none"> •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, 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. 	<ul style="list-style-type: none"> •Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. •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. 	<ul style="list-style-type: none"> •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.
	Key vocabulary	Consent, permission, online communities, online content, digital footprint, online identity, digital personality, anonymity, influence, manipulation, persuasion, privacy, search engines.	Website, web page, browser, media, Hypertext Markup Language (HTML), logo, layout, header, media, purpose, Copyright, fair use, home page, preview, evaluate, device, Hyperlink, evaluate, website, web page, implication, external link, embed	Variable, set, change, design, event, value, algorithm, artwork, program, project, code, test, debug, improve, evaluate, share	Micro:bit, MakeCode, input, process, output, flashing, USB, selection, condition, variable, sensing, accelerometer, compass, direction, navigation, design, task, algorithm, variable, step counter, plan, create, code, test, debug.	Index, crawler, bot, search engine, ranking, search engine optimisation, links, web crawlers, content creator, selection, ranking, communication, public, private, one-way, two-way, one-to-one, one-to-many, SMS, email, WhatsApp, blog.	Spreadsheet, data, data heading, data set, cells, columns, rows. data set, object, spreadsheet application, format, common attribute, input, output, cell reference, graph, chart, evaluate, results, comparison, questions, software, tools

	<p>Key knowledge</p>	<p>To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups. To understand how things shared privately online can have unintended consequences for others. To know strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity. know how someone would report online bullying in different contexts. To define the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online. To describe simple ways to increase privacy on apps and services that provide privacy settings. To demonstrate the use of search tools to find and access online content which can be reused by others.</p>	<p>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.</p>	<p>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 use my design to create a project. To evaluate my project.</p>	<p>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 an 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.</p>	<p>To know how to use a search engine. To describe how search engines select results. To explain how search results are ranked. To recognise why the order of results is important, and to whom. To recognise how we communicate using technology. To evaluate different methods of online communication.</p>	<p>To identify questions which can be answered using data. To explain that objects can be described using data. To explain that formulas can be used to produce calculated data. To apply formulas to data, including duplicating. To create a spreadsheet to plan an event. To choose suitable ways to present data.</p>
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