

CHERBOURG PRIMARY SCHOOL



Computing

Knowledge and Skills Year R to Year 6

Computing at Cherbourg Primary School is an ambitious, inclusive and future-focused subject taught from the Early Years Foundation Stage to the end of Key Stage 2. It equips all pupils, including those from disadvantaged backgrounds, with the knowledge, skills and confidence to thrive in an increasingly digital world. Through a culture of belonging, we empower every child to see themselves as capable, creative and responsible users of technology, without limitations.

The curriculum is carefully sequenced to ensure progression in computer science, information technology and digital literacy. Through these strands, pupils develop the knowledge and skills needed to think computationally, solve problems and understand how technology shapes the world around them.

From EYFS onwards, pupils begin to explore technology through play, curiosity and purposeful digital experiences. They learn how technology can support communication, creativity and learning while developing the foundations of safe and responsible use. In Key Stage 1, pupils build their understanding of algorithms, programming, digital content creation and online safety. They begin to recognise how technology is used in everyday life and develop confidence in using a range of digital tools.

In Key Stage 2, pupils deepen their understanding of computer science through programming, data representation, networks and digital systems. They learn to analyse problems in computational terms, design and debug programs, and evaluate how technology can be used effectively to solve real-world challenges. Pupils also develop increasingly sophisticated skills in creating, presenting and communicating information using a range of digital technologies.

The curriculum develops pupils' understanding of key computing concepts including algorithms, abstraction, logic, data, networks and digital systems. Computational thinking is central to learning, with pupils encouraged to break down problems, identify patterns, create solutions and evaluate outcomes. Through practical and engaging experiences, pupils gain repeated opportunities to apply their knowledge creatively and purposefully.

Digital literacy and online safety are embedded throughout the curriculum. Pupils learn how to navigate the digital world responsibly, respectfully and safely, developing an understanding of their digital footprint, online relationships, privacy and the importance of critical thinking when accessing information. They are encouraged to become confident and informed digital citizens who can participate positively in an ever-changing technological society.

Across all year groups, pupils are encouraged to be curious, reflective and resilient learners. The curriculum builds strong foundations that enable children to learn, reflect and flourish as they navigate the world. By combining creativity with computational thinking, Computing at Cherbourg broadens horizons, nurtures ambition and equips pupils with the knowledge, skills and understanding needed to become confident, compassionate and courageous participants in the digital world of today and the future.

Ellis Miles (Computing Leader), July 2026

Year R

EFYS Framework	Computer systems and networks	Programming	Creating Media	Data and information	Online Safety (e-safety)
Computer Science — Foundations of Coding - Following and giving instructions in order (e.g. ‘Simon Says’, obstacle courses, recipes). - Exploring cause and effect with programmable toys and simple devices. Information Technology — Using Devices - Exploring how everyday technology works and is used, through continuous provision. - Beginning to use a mouse, touchscreen or simple app purposefully with adult support. Digital Literacy & Online Safety - Beginning to understand that some things seen or heard on a screen may not be real. - Learning simple rules for using a device safely, and who to tell if something feels wrong.	Knowledge - Emerges through continuous provision: that everyday objects (e.g. tablets, cameras, remote controls) are technology and help us do things. Skills - Explore and talk about how familiar devices work and what they are used for. By the end of Reception - Most children will be beginning to recognise and talk about technology they see and use every day.	Knowledge - Emerges through continuous provision: that instructions have to be given in the right order to work. Skills - Follow and give simple step-by-step instructions (unplugged games, programmable toys). By the end of Reception - Most children will be beginning to sequence and follow simple instructions in order.	Knowledge - Emerges through continuous provision: that pictures, sounds and marks can be made using digital tools as well as paper and pens. Skills - Make marks, take photos or record sound using simple apps or devices, with adult support. By the end of Reception - Most children will be beginning to use a simple app or device to make and share a picture, mark or sound.	Knowledge - Emerges through continuous provision and Understanding the World / Maths: that objects can be sorted and grouped by their properties. Skills - Sort, group and compare objects by an obvious property (colour, size, type). By the end of Reception - Most children will be beginning to sort and group objects and talk about how they did it.	Aut 1 <i>Information and Media Literacy</i> — How Media Makes Me Feel Aut 2 <i>Privacy & Safety</i> — Caring For Our Devices Spr 1 <i>Relationships and Communication</i> — Why We Pause for People Spr 2 <i>Cyberbullying and Online Harms</i> — Icky Feelings Sum 1 <i>Healthy Habits</i> — Saying Goodbye to Tech Sum 2 <i>Digital Footprint and Identity</i> — Beyond the Avatar

Year 1

National Curriculum	Computer systems and networks	Programming	Creating Media	Data and information	Online Safety (e-safety)
Programming - 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 Computer systems and networks - 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 Creating Media / Data and information - use technology purposefully to create, organise, store, manipulate and retrieve digital content	Knowledge ‘Technology’ means anything that helps us and is not just computers. - Simple rules keep us safe and healthy when using technology, in and beyond school. Skills - Identify examples of technology in the classroom and explain how they help us. - Turn on, log in to, and use a mouse (click and drag) and keyboard (type, save, arrow keys, Backspace) on a computer. End of Year Expectations - Can identify technology around them, explain how it helps people, and log in and use a mouse/keyboard, following basic safety rules. Unit: Technology around us (Autumn 1) Activity: Sort classroom objects into ‘technology’ and ‘not technology’, then learn to log in and use a mouse and keyboard. LO: “I can locate examples of technology in the classroom” → Open full unit in companion document	Knowledge - A command tells a device what to do; an algorithm is a set of instructions followed in order. - A program only does what it is told; mistakes (‘bugs’) can be found and fixed. Skills - Predict, follow and give directions (forwards, backwards, turns) to a floor robot. - Plan and run a sequence of commands to reach a goal, trying more than one route; use simple on-screen blocks to move and change a sprite. End of Year Expectations - Can plan, build and debug a simple sequence of instructions, on a floor robot and on screen, to make something happen. Unit: Moving a robot (Spring 1) Activity: Give a floor robot forwards/backwards/turn commands to plan and test a route across a mat. LO: “I can debug my program” → Open full unit in companion document Unit: Programming animations (Summer 2) Activity: Build a ‘space race’ animation in ScratchJr; adding sprites and joining blocks to match a design. LO: “I can create an algorithm for each sprite”	Knowledge - Different paint tools (line, shape, brush) do different jobs. - A word processor has tools (bold, italic, underline, Backspace) for editing text. Skills - Use paint tools to draw lines, shapes and pictures, making deliberate colour/tool choices, including recreating an artist’s style. - Enter, delete, select and format text on a keyboard; compare working digitally with working on paper. End of Year Expectations - Can use paint and word-processing tools purposefully to create and edit simple digital artwork and text, explaining their choices. Unit: Digital Painting (Autumn 2) Activity: Use the paint, shape and line tools to recreate a picture in the style of an artist (e.g. Kandinsky). LO: “I can create a picture in the style of an artist” → Open full unit in companion document Unit: Digital writing (Summer 1) Activity: Type, edit and format a ‘lost toy’ poster in a word processor; then compare typing with handwriting. LO: “I can decide if my changes have improved my writing” → Open full unit in companion document	Knowledge - Objects can be labelled, described and grouped by their properties. Skills - Group and count objects in more than one way; describe a property of an object. - Choose how to group objects to answer a question, and record and share findings. End of Year Expectations - Can group objects by a chosen property and use their groupings to answer a simple question. Unit: Grouping data (Spring 2) Activity: Sort classroom objects into groups by a chosen property, then use the groups to answer a question. LO: “I can decide how to group objects to answer a question” → Open full unit in companion document	Aut 1 Privacy & Safety — Internet Traffic Light Aut 2 Healthy Habits — Managing Device Distractions Spr 1 Relationships and Communication — How Tech Connects Us Spr 2 Cyberbullying and Online Harms — Words Can Help of Hurt Sum 1 Digital Footprint and Identity — Is It OK To Share? Sum 2 Information and Media Literacy — Fact vs. Opinion

		→ Open full unit in companion document			
--	--	--	--	--	--

Year 2

National Curriculum	Computer systems and networks	Programming	Creating Media	Data and information	Online Safety (e-safety)
Programming - 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 Computer systems and networks - 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 Creating Media / Data and information - use technology purposefully to create, organise, store, manipulate and retrieve digital content	Knowledge 'IT' refers to computer-based devices, found around school and the wider world, and can be used in more than one way. Skills - Identify and sort examples of IT by where it is found and what it is used for. - Explain how IT devices work together, and why we use rules to stay safe using IT. End of Year Expectations - Can identify a range of IT beyond school, explain its benefits, and describe rules that keep them safe when using it. Unit: Information technology around us (Autumn 1) Activity: Identify examples of IT in school and beyond, and sort them by what they're used for. LO: "I can explain the need to use IT in different ways" → Open full unit in companion document	Knowledge - The same algorithm can be followed to create different outcomes. - Breaking a task into smaller parts makes it easier to program ('break it down'). Skills - Give and follow a sequence of instructions; predict, compare and debug sequences on a floor robot. - Design, build, test and debug an on-screen quiz/animation from a given design, choosing appropriate blocks and characters. End of Year Expectations - Can design an algorithm, use it to build a program (robot or on-screen), and test and debug it against their design. Unit: Robot algorithms (Spring 1) Activity: Design a mat and write an algorithm to move a floor robot around it, then debug it. LO: "I can plan algorithms for different parts of a task" → Open full unit in companion document Unit: Programming quizzes (Summer 2) Activity: Design and build a quiz in ScratchJr, then debug it against the original design. LO: "I can debug my program" → Open full unit in companion document	Knowledge - A 'good' photograph depends on framing and lighting, and images can be edited or changed. - Music is a sequence of sounds/notes that can be created, played and changed on a computer. Skills - Take, review and improve photographs in landscape/portrait, experimenting with light; recognise whether an image has been altered. - Create and refine a rhythm pattern and sequence of notes on a computer; linking sound to a chosen idea. End of Year Expectations - Can take and improve a digital photograph for a purpose, and compose and refine a simple piece of digital music. Unit: Digital photography (Autumn 2) Activity: Take and improve photographs in portrait/landscape, then edit one using colour effects. LO: "I can apply a range of photography skills to capture a photo" → Open full unit in companion document Unit: Making music (Summer 1) Activity: Create a rhythm pattern and melody inspired by a chosen animal, using a computer. LO: "I can add a sequence of notes to my rhythm" → Open full unit in companion document	Knowledge - Data can be collected in a tally chart and represented as a pictogram to answer questions. Skills - Enter and organise data on a computer; create a pictogram from tally data. - Compare data using 'more/less than' and 'most/least' questions. End of Year Expectations - Can collect data, represent it as a pictogram on a computer, and use it to answer simple questions, understanding some information should not be shared. Unit: Pictograms (Spring 2) Activity: Collect and tally data, then use it to build a pictogram and answer questions about it. LO: "I can use a computer program to present information in different ways" → Open full unit in companion document	Aut 1 Healthy Habits — Device Free Moments Aut 2 Privacy & Safety — That's Private! Spr 1 Relationships and Communication — Who Is In Your Online Community Spr 2 Digital Footprint and Identity — Be a Super Digital Citizen Sum 1 Information and Media Literacy — How to Search Online Sum 2 Cyberbullying and Online Harms — Dealing with Online Meanness

Year 3

National Curriculum	Computer systems and networks	Programming	Creating Media	Data and information	Online Safety (e-safety)
Programming - 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 Computer systems and networks - 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 - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of	Knowledge - Digital devices accept inputs and produce outputs, following a process in between. - A network is a number of devices connected together; a switch, server and wireless access point each have a role. Skills - Classify input/output devices and explain what makes a password secure. - Explain how devices in a network (e.g. the school network) are connected, and identify the benefits of computer networks. End of Year Expectations - Can explain how digital devices work as input-process-output systems, and describe how devices are connected in a network. Unit: Connecting computers (Autumn 1) Activity: Explore how devices in the school network are connected via a switch, server and wireless access point. LO: "I can explain the role of a switch, server, and wireless access point in a network" → Open full unit in companion document	Knowledge - Objects in a program (e.g. sprites) have attributes; code runs in the order it is sequenced. - An 'event' (e.g. a key press) causes an 'action' in a program. Skills - Build a sequence of commands to control a sprite or sound, matching code to a design. - Choose keys/events to trigger actions; test a program against a design and debug it. End of Year Expectations - Can design and build a program using a sequence of commands linked to events, and test and debug it against a design. Unit: Sequencing sounds (Spring 1) Activity: Build a simple instrument in Scratch by sequencing sound and motion blocks to a design. LO: "I can implement my algorithm as code" → Open full unit in companion document Unit: Events and actions in programs (Summer 2) Activity: Program a sprite to navigate a maze using key-press events, then debug it against a design.	Knowledge - A stop-frame animation is made of many small changes between frames. - A template/layout should suit its purpose; placeholders differ from added content. Skills - Storyboard, film and evaluate a stop-frame animation, using onion-skinning to check consistency, adding sound and other media. - Create and edit a desktop-published page (text, images, layout) for a given purpose. End of Year Expectations - Can plan and produce a short animation or a desktop-published document, reviewing and improving it against a purpose. Unit: Stop-frame animation (Autumn 2) Activity: Storyboard and film a stop-frame animation using onion-skinning, then add sound and effects. LO: "I can create an effective stop-frame animation" → Open full unit in companion document	Knowledge - Objects can be grouped using yes/no questions, ordered carefully to split a group evenly. Skills - Create a branching database by grouping objects using their own yes/no questions. - Test whether a branching database correctly identifies objects. End of Year Expectations - Can create and test a branching database that uses a sequence of yes/no questions to identify objects, and suggest real-world uses. Unit: Branching databases (Spring 2) Activity: Create a paper, then digital, branching database of yes/no questions to identify dinosaurs. LO: "I can create a branching database that reflects my plan" → Open full unit in companion document	Aut 1 Self Image and Identity — I can explain how my online identity can be different to... Aut 2 Online Relationships — I can explain what is meant by 'trusting someone online'... Spr 1 Online Bullying — I can recognise online bullying can be different to... Spr 2 Managing Online Information — I can explain the difference between a 'belief', an... Sum 1 Health, Wellbeing and Lifestyle — I can explain why some online activities have age... Sum 2 Privacy and Security — I can give reasons why someone should only share...

ways to report concerns about content and contact Creating Media / Data and information • 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		LO: <i>"I can evaluate my project"</i> → Open full unit in companion document	Unit: Desktop publishing (Summer 1) Activity: Design and lay out a magazine front cover using a template, text and images. LO: <i>"I can choose a suitable layout for a given purpose"</i> → Open full unit in companion document		
---	--	--	---	--	--

Year 4

National Curriculum	Computer systems and networks	Programming	Creating Media	Data and information	Online Safety (e-safety)
Programming - 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 Computer systems and networks - 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 - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact Creating Media / Data and information - 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	Knowledge - The internet is a network of networks; the World Wide Web is one of the services it provides. - Not everything read online is true, accurate or legal; content should be checked before it is shared. Skills - Explain how information is shared across the internet, and describe where and how websites are stored and accessed. - Evaluate whether online information can be trusted, and explain why. End of Year Expectations - Can describe the internet as a network of networks providing services such as the web, and evaluate whether online content can be trusted. Unit: The internet (Autumn 1) Activity: Investigate how the internet shares information across networks, then evaluate whether online content can be trusted. LO: "I can explain why I need to think carefully before I share or reshare content" → Open full unit in companion document	Knowledge - Repetition (a 'loop') avoids repeating the same code; count-controlled and infinite loops behave differently. Skills - Identify and use repetition in a program to produce shapes and patterns, predicting outcomes and changing loop values. - Design and build a game that uses repetition, evaluating and improving it against a design. End of Year Expectations - Can design, build and debug a program that uses count-controlled and/or infinite loops to repeat actions for a purpose. Unit: Repetition in shapes (Spring 1) Activity: Use count-controlled loops in Logo to draw repeating shapes and patterns. LO: "I can design a program that includes count-controlled loops" → Open full unit in companion document Unit: Repetition in games (Summer 2) Activity: Design and build a Scratch game that uses loops to repeat actions. LO: "I can build a program that follows my design" → Open full unit in companion document	Knowledge - A podcast/recording is planned, recorded, edited and combined from multiple sound parts. - Editing images (crop, recolour, clone, combine) can be used ethically or unethically. Skills - Record, review and edit audio to plan and produce a podcast, combining sounds for effect. - Use photo-editing tools to crop, recolour, clone and combine images for a purpose, then evaluate the result. End of Year Expectations - Can plan, create and evaluate a piece of digital audio or an edited image, explaining and justifying the choices made. Unit: Audio production (Autumn 2) Activity: Plan, record and edit voice and sound layers to produce a podcast. LO: "I can arrange multiple sounds to create the effect I want" → Open full unit in companion document Unit: Photo editing (Summer 1) Activity: Use crop, clone and combine tools to edit and evaluate a digital image. LO: "I can combine text and my image to complete the project" → Open full unit in companion document	Knowledge - A data logger collects data automatically, at set time intervals, using sensors. Skills - Choose a question that can be answered using logged data. - Use a data logger to collect data, then view, sort and interpret it at different levels of detail. End of Year Expectations - Can plan a question, use a data logger to collect the data needed, and interpret the results to answer it. Unit: Data Logging (Spring 2) Activity: Use a data logger to collect data automatically, then interpret it to answer a chosen question. LO: "I can interpret data that has been collected using a data logger" → Open full unit in companion document	Aut 1 Self Image and Identity — I can explain that others online can pretend to be... Aut 2 Online Relationships — I can explain the importance of giving and gaining... Spr 1 Online Bullying — I can describe how what one person perceives as playful... Spr 2 Managing Online Information — I can explain why lots of people sharing the same... Sum 1 Health, Wellbeing and Lifestyle — I can identify times or situations when someone may need... Sum 2 Privacy and Security — I can describe strategies for keeping personal...

Year 5

National Curriculum	Computer systems and networks	Programming	Creating Media	Data and information	Online Safety (e-safety)
Programming - 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 Computer systems and networks - 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 - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	Knowledge - A system is made of connected parts with an input, process and output; human and digital elements work together. - Search engines index the web and rank results using rules that can be influenced. Skills - Identify the human and digital elements of a computer system and explain its benefits. - Refine a web search, compare results across engines, and recognise trustworthy websites and how results can be influenced. End of Year Expectations - Can explain how a computer system's parts work together, and use and evaluate how search engines find, rank and can influence results. Unit: Systems and Searching (Autumn 1) Activity: Investigate how search engines index and rank results, then compare results across engines. LO: "I can explain how search engines make money" → Open full unit in companion document	Knowledge - A condition is either true or false; selection ('if...then...else...') lets a program's flow branch on a condition. Skills - Connect and program a microcontroller (e.g. Crumble) to respond to inputs/conditions using selection. - Design, build and test an on-screen quiz that uses selection to produce different outcomes from user input. End of Year Expectations - Can design, build and test a physical or on-screen program that uses selection (if/then/else) to respond to a condition or input. Unit: Selection in physical computing (Spring 1) Activity: Program a Crumble microcontroller to respond to inputs using selection (if/then). LO: "I can use selection to produce an intended outcome" → Open full unit in companion document Unit: Selection in quizzes (Summer 2) Activity: Build an interactive Scratch quiz that uses selection (if/then/else) to give different outcomes. LO: "I can create a program that uses selection to produce different outcomes" → Open full unit in companion document	Knowledge - Video is a visual media format combining planned filming techniques (camera angle, microphone use) for effect. - A vector drawing is made of shapes/objects arranged in layers, unlike a pixel-based paint drawing. Skills - Plan, storyboard, film, import and edit video footage, then evaluate and refine it. - Use vector drawing tools (zoom, layering, grouping/duplicating objects) to create and refine an image for a purpose. End of Year Expectations - Can plan and produce an edited video or a layered vector drawing for a given purpose, reflecting on the skills and choices used. Unit: Video production (Autumn 2) Activity: Storyboard, film and edit a short video, applying different camera and editing techniques. LO: "I can recognise that my choices when making a video will impact the quality of the final outcome" → Open full unit in companion document Unit: Introduction to vector drawing (Summer 1)	Knowledge - A database is organised into fields and records; data can be sorted, grouped and searched using more than one criterion. Skills - Navigate, sort and group a flat-file database; use search tools with AND/OR to answer questions. - Select and refine an appropriate chart to compare data visually. End of Year Expectations - Can use a database's search, sort and grouping tools, and present findings appropriately, to answer a question with more than one field. Unit: Flat-file databases (Spring 2) Activity: Use a database's search, sort and grouping tools (including AND/OR) to answer real questions. LO: "I can outline how 'AND' and 'OR' can be used to refine data selection" → Open full unit in companion document	Aut 1 Self Image and Identity — I can explain how identity online can be copied, modified... Aut 2 Online Relationships — I can give examples of how to be respectful to others... Spr 1 Online Bullying — I can identify a range of ways to report concerns and... Spr 2 Managing Online Information — I can explain what is meant by fake news e.g. why some... Sum 1 Health, Wellbeing and Lifestyle — I can describe ways technology can affect health and... Sum 2 Privacy and Security — I can describe effective ways people can manage passwords...

Creating Media / Data and information • 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			Activity: Use layering, grouping and duplication to create a vector graphic for a purpose. LO: <i>"I can create a vector drawing for a specific purpose"</i> → Open full unit in companion document		
--	--	--	--	--	--

Year 6

National Curriculum	Computer systems and networks	Programming	Creating Media	Data and information	Online Safety (e-safety)
Programming - 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 Computer systems and networks - 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 - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact Creating Media / Data and information	Knowledge - Data is transferred across the internet in packets; internet-connected devices have addresses so data reaches the right place. - Communication and collaboration online can be public or private, and may not stay private even when intended to. Skills - Explain how data packets and addresses allow devices to communicate; access and work on shared files/documents online. - Choose an appropriate method to communicate online for a purpose, and explain how to report inappropriate content. End of Year Expectations - Can explain how the internet enables communication and collaboration (addresses, packets, shared working), and do so responsibly. Unit: Communication and collaboration (Autumn 1) Activity: Investigate how data packets and IP addresses let devices communicate, then collaborate on a shared online project. LO: “I can explain that communication on the internet may not be private” → Open full unit in companion document	Knowledge - A variable is a named placeholder in memory holding a value that can change (e.g. a score). - A program can sense physical inputs (e.g. via a micro:bit) and use conditions to control its flow. Skills - Create, name and use variables to extend and improve a game. - Design and build a program (e.g. a step counter) that uses variables, selection and sensed inputs, testing and debugging against a design. End of Year Expectations - Can design, build, test and debug a program — on-screen or on a physical device — that uses variables and selection to respond to input and achieve a goal. Unit: Variables in games (Spring 1) Activity: Create and use variables (e.g. a score) to improve and extend a Scratch game. LO: “I can use variables to extend my game” → Open full unit in companion document Unit: Sensing (Summer 2) Activity: Program a micro:bit step counter that senses motion and uses selection to respond to it. LO: “I can use a range of approaches to find and fix bugs”	Knowledge - Websites are built from HTML and combine media, navigation and hyperlinks; copyright/fair use applies to content found online. - A 3D model is built by combining, resizing and positioning 3D objects. Skills - Design, build and link multiple web pages using copyright-free media and working hyperlinks; evaluate a website’s design and user experience. - Create, modify, combine and evaluate a 3D model against a plan. End of Year Expectations - Can design and build a linked, navigable web page (or a 3D model) that combines media purposefully and respects copyright, evaluating the outcome. Unit: Web page creation (Autumn 2) Activity: Design, build and link multiple web pages with copyright-free images and working hyperlinks. LO: “I can create hyperlinks to link to other people’s work” → Open full unit in companion document Unit: 3D Modelling (Summer 1) Activity: Design and build a 3D model (e.g. of a building) by	Knowledge - A spreadsheet organises data in formatted cells; a formula calculates a result and updates automatically when inputs change. Skills - Enter and format data in a spreadsheet; construct and duplicate a formula across a range of cells. - Produce and choose an appropriate chart to present an answer. End of Year Expectations - Can collect and organise data in a spreadsheet, use formulas to calculate answers to questions, and present findings as a chart. Unit: Introduction to spreadsheets (Spring 2) Activity: Build a spreadsheet with formulas and charts to plan and cost an event. LO: “I can apply a formula to calculate the data I need to answer questions” → Open full unit in companion document	Aut 1 Self Image and Identity — I can describe issues online that could make anyone feel... Aut 2 Online Relationships — I can explain that taking or sharing inappropriate images... Spr 1 Online Bullying — I can describe how to capture bullying content as... Spr 2 Managing Online Information — I can define the terms ‘influence’, ‘manipulation’ and... Sum 1 Health, Wellbeing and Lifestyle — I can assess and action different strategies to limit the... Sum 2 Privacy and Security — I can describe ways in which some online content targets...

• 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		→ Open full unit in companion document	combining, resizing and grouping objects. LO: <i>"I can construct a 3D model based on a design"</i> → Open full unit in companion document		
--	--	---	--	--	--