



	End of KS1	End of Lower KS2	End of Upper KS2
Information technology	<p>To use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <ul style="list-style-type: none"> add text strings, text boxes and show and hide objects and images, manipulating the features; use various tools, such as brushes, pens, eraser, stamps and shapes, and set the size, colour and shape; use applications and devices in order to communicate ideas, work, messages and demonstrate control; use software to record and change sounds; save, retrieve and organise work; use key vocabulary to demonstrate knowledge and understanding: paint, colour, brush, tools, settings, undo, redo, text, image, size, poster, launch, application, software, window, minimise, restore, size, move, screen, close, click, drag, log on, log off, keyboards, keys, mouse, click, button, double click, drag, present. 	<p>To 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. To 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.</p> <ul style="list-style-type: none"> create different effects with different technological tools, demonstrating control; use appropriate keyboard commands to amend text on a device; use applications and devices in order to communicate ideas, work, and messages; use software to record, create and edit sounds and capture still images; save, retrieve and evaluate work, making amendments; use key vocabulary to demonstrate knowledge and understanding: draw, object, shape, line, line colour, fill colour, group, ungroup, font, size, text box, format, image, wrap text, plan, link, image, object, hyperlink, minimise, restore, size, move, screen, split, create, organise, file, folder, close, exit, search, print, screenshot, shift, undo, redo, menu, highlight, cursor, toolbar, spellcheck. 	<p>To 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.</p> <ul style="list-style-type: none"> use the skills already developed to create content using unfamiliar technology; select, use and combine the appropriate technology tools to create effect; review and improve their own work and support others to improve their work; use a digital device to record sounds and present audio; save, retrieve and evaluate their work, making amendments; use key vocabulary to demonstrate knowledge and understanding: window, layout, text, font, colour, format, heading, hyperlink, 2D shape, 3D shape, pan, zoom, eraser, dimension.
Computer science	<p>To understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions. To create, debug and use logical reasoning to predict the behaviour of simple programs.</p> <ul style="list-style-type: none"> give commands one at a time to control direction and movement, including straight, forwards, backwards, turn; control the nature of events: repeat, loops, single events and add and delete features; give a set of instructions to follow and predict what will happen; improve/change their sequence of commands by debugging; use key vocabulary to demonstrate knowledge and understanding: algorithm, instruction, order, debug, program, turn, left, right, clockwise, anticlockwise, blocks, sequence, project, repeat, repeat forever, invisible, grow, shrink. 	<p>To design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solving problems by decomposing them into smaller parts. To use sequence, selection, and repetition in programs and work with variables and various forms of input and output. To use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> <ul style="list-style-type: none"> use logical thinking to solve an open-ended problem by breaking it up into smaller parts; write a program, putting commands into a sequence to achieve a specific outcome; give a set of instructions to follow and predict what will happen; keep testing a program and recognise when it needs to be debugged; use variables to create an effect, e.g. repetition, if, when, loop; use key vocabulary to demonstrate knowledge and understanding: decompose, decomposing, logical sequence, flowchart, sprite, block, command, algorithm, answer, correct, errors, program, algorithm, instructions, commands, forward (fd), left (lt), right (rt), move, turn, clear screen (cs), variable. 	<p>To design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solving problems by decomposing them into smaller parts. To use sequence, selection, and repetition in programs and work with variables and various forms of input and output. To use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p> <ul style="list-style-type: none"> use external triggers and infinite loops to demonstrate control; follow a sequence of instructions, e.g. in a flowchart and modify a flowchart using symbols; use conditional statements and edit variables; decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program; keep testing a program and recognise when it needs to be debugged; use key vocabulary to demonstrate knowledge and understanding: flowchart, algorithm, control, output, symbol, start, stop, delay, process, decision, loop, backdrop, script, block, repeat, commentary, sequence, consequence, debug, program, world, object, tool palette, program environment, smooth, flatten, raise.

Online safety and digital literacy

**To use technology safely and respectfully, keeping personal information private;
To identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.
To recognise common uses of technology beyond school.**

- identify what things count as personal information;
- identify what is appropriate and inappropriate behaviour on the internet;
- agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords;
- seek help from an adult when they see something that is unexpected or worrying;
- demonstrate how to safely open and close applications and log on and log off from websites;
- recognise ways that technology is used in the home and community, e.g. taking photos, blogs, shopping;
- use links to websites to find information;
- recognise age-appropriate websites;
- use safe search filters;
- use key vocabulary to demonstrate knowledge and understanding in this strand: safe, meet, accept, reliable, tell, online, trusted, adult, information, safety, personal, key, question, tell, safe, share, stranger, danger, internet.

**To use technology safely, respectfully and responsibly.
To recognise acceptable/unacceptable behaviour and identify a range of ways to report concerns about content and contact.
To 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.
To use search technologies effectively, appreciate how results are selected and ranked, and are discerning in evaluating digital content.**

- reflect on their own digital footprint and behaviour online;
- identify what is appropriate and inappropriate behaviour on the internet, recognising the term cyberbullying;
- agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords;
- seek help from an adult when they see something that is unexpected or worrying;
- demonstrate understanding of age-appropriate websites and adverts;
- explain ways to communicate with others online;
- describe the world wide web as the part of the internet that contains websites;
- use search tools to find and use an appropriate website and content;
- use strategies to improve results when searching online;
- use key vocabulary to demonstrate knowledge and understanding in this strand: safe, meet, accept, reliable, tell, online, trusted, adult, information, safety, personal, internet, world wide web, communicate, message, social media, email, password, cyberbullying/bullying, plagiarism, profiles, account, private, public.

**To use technology safely, respectfully and responsibly.
To recognise acceptable/unacceptable behaviour and identify a range of ways to report concerns about content and contact.
To 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.
To use search technologies effectively, appreciate how results are selected and ranked, and are discerning in evaluating digital content.**

- protect their password and other personal information;
- be a good online citizen and friend;
- judge what sort of privacy settings might be relevant to reducing different risks;
- seek help from an adult when they see something that is unexpected or worrying;
- discuss scenarios involving online risk;
- search for information using appropriate websites;
- use strategies to check the reliability of information (cross-check with another source);
- talk about the way search results are selected and ranked;
- tell you about copyright and acknowledge the sources of information;
- use key vocabulary to demonstrate knowledge and understanding in this strand: spam, link, privacy, virus, scam, phishing, inbox, junk, sender, subject, secure, safe, account, online, private, social media, adverts, cyberbullying, reporting, anonymous, victim, fraud/fraudulent, policy, private/personal.