

Computing Curriculum Overview



Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
ALL CHILDREN	<p>Equip our children for digital life and to support children to live knowledgeably, responsibly and safely in a digital world.</p> <ul style="list-style-type: none"> Self-image and identity Online relationships Online reputation Online bullying Managing online information Health, well-being and lifestyle Privacy and security Copyright and ownership 					
Nursery	<p>Self-Image and Identity</p> <p>I can recognise online or offline when to say No-Please STOP or I'll TELL!</p> <p>I can explain how this could be either in real life or online.</p>	<p>Online Relationships</p> <p>I can recognise some ways in which the internet can be used to communicate. I can name some ways that members of my family talk to each other and other people using the internet</p>	<p>Online Reputation</p> <p>I can name some ways that members of my family talk to each other and other people using the internet</p>	<p>Online Bullying</p> <p>I can describe ways that some people can be unkind online.</p> <p>I know what being 'unkind online' means and looks like I understand that you can be unkind and kind to someone online</p>	<p>Managing Information online</p> <p>I can talk about how I can use the internet to find things out.</p> <p>I can identify devices I could use to access information on the internet</p>	<p>Health Wellbeing and Lifestyle</p> <p>I can identify rules that help keep us safe and healthy in and beyond the home when using technology.</p>
	<ul style="list-style-type: none"> Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes Explore how things work Investigate and find out using technology taking a photograph with a camera or tablet searching for information on the internet playing games on the interactive whiteboard exploring an old typewriter or other mechanical toys using a Beebot watching a video clip listening to music use 'MiniMash' and Purple Mash <p>Three and Four-Year-Olds 'Development Matters 2021'</p> <p>Personal, Social and Emotional Development • Remember rules without needing an adult to remind them.</p> <p>Physical Development • Match their developing physical skills to tasks and activities in the setting.</p> <p>Understanding the World • Explore how things work.</p>					
Reception	<p>Self-Image and Identity</p> <p>I can recognise that there may be people online who</p>	<p>Online Relationships</p> <p>I can give examples of when I should ask</p>	<p>Online Bullying</p> <p>I can describe how to behave online in</p>	<p>Health Wellbeing and Lifestyle</p>	<p>Privacy and Security</p> <p>I can identify some simple examples of</p>	<p>Copyright and Ownership</p> <p>I know that work I create belongs to me</p>

could make me feel sad, embarrassed or upset. I know when I should ask an adult for help with things online that upset me. I can give examples of different adults I can ask for help.	permission to do something online and explain why this is important. Online Reputation I can recognise that information can stay online and could be copied.	ways that do not upset others and can give examples Managing Information online I can give simple examples of how to find information (e.g. search engine, voice activated searching)	I can explain rules to keep myself safe when using technology both in the home and beyond.	my personal information (e.g. name, address, birthday, age, location). I can describe the people I can trust and can share this with; I can explain why I can trust them	I can name my work so that others know it belongs to me
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- Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes
- Explore how things work
- Investigate and find out using technology
- taking a photograph with a camera or tablet
- searching for information on the internet
- playing games on the interactive whiteboard
- exploring an old typewriter or other mechanical toys
- using a Beebot
- watching a video clip
- listening to music
- use 'MiniMash' and Purple Mash

Reception 'Development Matters 2021'

Personal, Social and Emotional Development • Show resilience and perseverance in the face of a challenge. • Know and talk about the different factors that support their overall health and wellbeing: -sensible amounts of 'screen time'.

Physical Development • Develop their small motor skills so that they can use a range of tools competently, safely and confidently.

Expressive Arts and Design • Explore, use and refine a variety of artistic effects to express their ideas and feelings.

ELG Personal, Social and Emotional Development

Managing Self • Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. • Explain the reasons for rules, know right from wrong and try to behave accordingly.

ELG Expressive Arts and Design

Creating with Materials • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Key skills for KS1

Pupils should be taught to:

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

Year 1	<p>Online safety and exploring purple mash DL 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.</p> <p>Technology outside school. DL Recognise common uses of information technology beyond school</p>	<p>Lego Builders CS Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</p> <p>Maze Explorers. CS 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.</p>	<p>Grouping & Sorting IT Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Pictograms IT Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>	<p>Animated Story Books. IT Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>	<p>Spreadsheets. IT Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>	<p>Coding. CS 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</p>
Year 2	<p>Coding CS 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.</p> <p>Online Safety DL 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.</p>	<p>Spreadsheets IT Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Questioning IT Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>	<p>Effective Searching IT Use technology purposefully to create, organise, store, manipulate and retrieve digital content Recognise common uses of information technology beyond school</p>	<p>Creating Pictures IT Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>	<p>Making Music IT Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>	<p>Presenting Ideas IT Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>
Key skills for KS2	<p>Pupils should be taught to:</p> <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 • 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 					

Year 3	<p>Coding CS 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</p>	<p>Online Safety DL Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Spreadsheets IT Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>	<p>Touch Typing IT 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>	<p>Email CS IT DL 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. 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.</p>	<p>Branching Databases IT 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>	<p>Simulations IT 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> <p>Graphing IT 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>
Year 4	<p>Coding CS IT 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. IT</p> <p>Online Safety DL IT Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p>Spreadsheets IT Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>	<p>Writing for different purposes IT 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>	<p>Logo CS 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</p>	<p>Animation IT 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> <p>Effective Searching CS IT 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.</p>	<p>Hardware Investigators CS 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.</p>

Year 5	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.					
	<p>Concept Maps IT 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> <p>Online Safety DL CS Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 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.</p>	<p>Coding CS IT 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. IT</p>	<p>Spreadsheets IT 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>	<p>Game Creator IT CS Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. CS</p>	<p>Databases IT 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>	<p>3D Modelling IT 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>
Year 6	<p>Coding CS IT 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. IT</p> <p>Online Safety DL IT CS</p>	<p>Blogging CS IT DL 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 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>	<p>Spreadsheets IT 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>	<p>Text Adventures CS IT 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. IT</p>	<p>Networks CS 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.</p>	<p>Quizzing IT 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>

<p>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.</p> <p>CS</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. IT</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact DL</p>						
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DL - Digital Literacy

IT - Information Technology

CS - Computer Science