



Computing Curriculum Progression Map

	Digital Literacy	Computer Science	Information Technology
<u>Key Concepts:</u>	Technology in the Real World Media and Content Online Safety	Computational Thinking Coding Logical Reasoning Networking Online	Harnessing Technology Online

Early Years

	Unit:	EYFS Framework	Children should know:	Children should be able to:
Reception	Technology and Me	Children in Reception will learn to: Return to and build on their previous learning, refining ideas and developing their ability to represent them.	<ul style="list-style-type: none"> that people can talk to each other online that online content is made and belongs to someone 	<ul style="list-style-type: none"> discuss the use of technology in the world around them use a search engine discuss the rules for staying safe online
	My Online Life			<ul style="list-style-type: none"> explain an algorithm explain sequencing give instructions to a programmable toy
	Robots	Children at the expected level of development will: Share their creations, explaining the process they have used	<ul style="list-style-type: none"> select and use technology for particular purposes 	

KS1 and KS2

	Unit:	National Curriculum Objectives:	Children should know:	Children should be able to:
Year 1	Modern Tales	Pupils should be taught to: <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 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"> • the ways we use technology in our classroom, homes and community • to communicate politely via the internet • that once something is posted you lose control of it • the rules of using technology at home or in school • that content online is owned by the person that created it • that something online may upset and know where to find help if anything does 	<ul style="list-style-type: none"> • use a search engine • describe how to behave online in ways that do not upset others explain what personal information is and give examples of it
	My Online Life			<ul style="list-style-type: none"> • use technology to create and present ideas • organise and store digital work • collect and sort data
	What is a computer?			<ul style="list-style-type: none"> • follow a simple algorithm and create a simple sequence algorithm using symbols that solve a problem • create algorithms that can be turned into a program using a robot or digital device • independently debug simple sequence errors in a program • use logical reasoning to predict the outcome of simple programs
	Mini-beast Hunt			

Year 2	<p>Online Buddies</p> <p>My Online Life</p>	<p>Pupils should be taught to:</p> <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 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"> that some things online may be upsetting and that you cannot trust everyone online that once something is posted you lose control if it and know how to get help if they need to where to go for support that not everything they read online is true the rules of using technology at home or in school that personal information is private and understand the need for passwords to protect it that content online is owned by the person that created it 	<ul style="list-style-type: none"> use a search engine give examples of how technology is used to communicate beyond school use online services to communicate safely give examples of online bullying behavior understand the impact it may have
	<p>Code a Story</p>			<ul style="list-style-type: none"> plan out an algorithm with a sequence of commands to carry out specific tasks identify 'bugs' in computer programs and use the term debug in context create a simple repeat loop create a simple game program predict the outcome of a sequence of blocks in Scratch
	<p>Story Land</p>			<ul style="list-style-type: none"> use design and formatting to enhance my digital work create with technology. E.g. Video, animation, 3D collect and record data purposefully
Year 3	<p>Online Detectives</p> <p>My Online Life</p>	<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 	<ul style="list-style-type: none"> they cannot trust everyone they talk to online, that they should be a good digital citizen and where to go for help if something upsets them online that technology can have an impact on their health, wellbeing and lifestyle 	<ul style="list-style-type: none"> use the internet to analyse information and make accurate searches understand the need for copyright and the consequences of ignoring it know what they should be sharing online and where to go for help if they need it

		<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 • 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"> • know who they should be sharing information with and how to keep their data secure • explain what bullying is and know where to go for help • understand the term identity and I can take appropriate measures to protect my own online
	Dancing Robots			<ul style="list-style-type: none"> • plan, create and debug programs • use decomposition to help me solve computing problems • use sequence, selection, repetition and variables in programs • work with various forms of input and output • use logical reasoning to predict and correct errors in algorithms and programs • explain how the internet works • explain how a search engine works
	Rainforests			<ul style="list-style-type: none"> • improve the quality and presentation of my work • create with technology. E.g. Video, animation, 3D • collect, analyse, evaluate and present data and information • use advanced search tools
Year 4	Fake or Real? My Online Life	<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 	<ul style="list-style-type: none"> • that people may have a different online identity to that in real life and be able to interact with others • that others can find information out about them by searching online 	<ul style="list-style-type: none"> • collaborate online to create digital content • evaluate information presented to them to make informed choices about what is Fake News • describe strategies for safe and fun experiences in a range of online social environments

		<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 • 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"> • that technology can have an impact on health, wellbeing and lifestyle • some people want to access their data and can take appropriate measures to ensure this doesn't happen 	<ul style="list-style-type: none"> • know which technologies are used for online bullying and be considerate of others when posting • understand the need for copyright and the consequences of ignoring it
	Games Designer			<ul style="list-style-type: none"> • design an algorithm to simulate a real-life situation • solve an open-ended problem by breaking it up into smaller parts • design and write a program for a given purpose including specific programming features • test existing programs to see how they could be improved • understand the different methods of communication using the internet
	Dinosaurs			<ul style="list-style-type: none"> • improve the quality and presentation of my work using editing and formatting techniques • create with technology. E.g. Video, animation, 3D • use a search engine and I am aware that not everything I read online is correct
Year 5	YouTuber My Online Life	<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 	<ul style="list-style-type: none"> • there are people online who may try to upset me and my group of friends • that online bullying can have an impact and know what to do they are the victim or they witness online bullying 	<ul style="list-style-type: none"> • create a subject specific vlog and understand the potential risks of sharing content online • collaborate to develop & improve work • search for someone online and create a summary report about that person • create a strong password and understand the real cost of some apps

		<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 • 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"> • that technology can have an impact on my health, wellbeing and lifestyle • their identity can be copied by other users and take appropriate measure to minimise the risk of this happening 	<ul style="list-style-type: none"> • understand the need for copyright and the consequences of ignoring it
	<p>Web Designer</p>			<ul style="list-style-type: none"> • decompose a problem, design an algorithm and use this to write a program • design and write a program linked to physical systems and sensors • use variables, conditional statements, procedures & repeat commands to improve programs • use logical reasoning to detect & debug a program • explore networks and internet traffic • translate binary numbers to decimal • create a basic web page using HTML
	<p>Making AR Games</p>			<ul style="list-style-type: none"> • record and produce a podcast / audio clips • use unfamiliar technology to create content • use a spreadsheet to collect and record data • use a search engine and be aware that not everything they read online is correct

Year 6	Online Safety Dilemmas	<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 	<ul style="list-style-type: none"> about the need for copyright and the consequences of ignoring it that the media can shape our ideas about gender to keep asking for help until they get help about the need for positive online relationships and be mindful of others feelings at all times how to capture evidence of online bullying and how to report it how to keep their data private and secure that technology can have an impact on health, wellbeing and lifestyle 	<ul style="list-style-type: none"> explain how to protect my computer or device from harm on the Internet support friends to protect themselves and make good choices online, including reporting concerns to an adult
	VR Worlds			<ul style="list-style-type: none"> design, plan & create a complex programs test, debug and modify a program to improve it write a program using a text based programming language use logical reasoning to detect and correct errors in algorithms and programs understand how computer networks work, including the internet talk about the way search results are selected and ranked
	Crossy Roads			<ul style="list-style-type: none"> create and combine a range of media in order to produce digital content improve the quality and presentation of my work using editing and formatting techniques create a digital storyboard to plan a project or investigation use a search engine and are aware that not everything they read online is correct and that other people may be attempting to influence their opinions

