



What are the aims and intentions of this curriculum?

That children:

- 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.

Term	Topic	Key Learning (Knowledge & Skills)	Key Vocabulary
Autumn 1	What is a computer? (Computing systems)	<ul style="list-style-type: none">• Know computers have inputs and outputs• Know how computers are used in the wider world• Know about different types of technologies e.g. phones, cameras, clock, remote control• Know some inputs for a computer e.g. monitor, speakers, printers• Understand what a computer is and that it is made from different components• Learn how we know that technology is doing what we want it to via its outputs• Recognise that buttons cause effects and that technology follows instructions	battery, buttons, computer, desktop, device, electricity, invention, laptop, technology, wire
Autumn 2	Algorithms and debugging (Programming)	<ul style="list-style-type: none">• know that problems in an algorithm can be decomposed into smaller chunks• know that algorithms are instructions• know what abstraction is• decompose a game to predict the algorithms used to create it• learn what abstraction is• explain what an algorithm is	artificial intelligence (AI), bug, correct, data, debug, decompose, error, key features, loop, predict, unnecessary



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		<ul style="list-style-type: none"> • follow an algorithm • create a clear and precise algorithm • incorporate loops within algorithms 	
Spring 1	Word processing (Computing systems)	<ul style="list-style-type: none"> • know how to change fonts when word processing • know how to delete, spacebar and enter keys on a keyboard • know what e-books and e-documents are • develop confidence with the keyboard and the basics of touch typing • develop word processing skills including altering text, copying and pasting and using keyboard shortcuts 	backspace, copyright, image, import, keyboard character, paste, undo/redo, touch typing
Spring 2	ScratchJr (Programming)	<ul style="list-style-type: none"> • know that with logical reasoning it is possible to predict the behaviour of a simple program • know how algorithms are implemented • know that programs execute by following unambiguous instructions • use decomposition to decompose a story in smaller parts • explain what an algorithm is • follow an algorithm • use an algorithm to write a basic computer program • incorporate loops to make code more efficient 	animation, bug, code, debug, icon, imitate, instructions, sequence
Summer 1	Stop Motion (Creating Media)	<ul style="list-style-type: none"> • Know how to create simple animations • Know how still images become moving images • Know how to use tablets to take and retrieve photos • Use software to create story animations • Use greater control when taking photos with tablets 	animator, contraption, decompose, design, download, film review, filming, import, image, plan, sketch, software, stop motion, storyboard, upload
Summer 2	<u>International Space Station</u> (Data Handling)	<ul style="list-style-type: none"> • understand that you can enter simple data into a spreadsheet. • understand what steps you need to take to create an algorithm • know what data to use to answer certain questions. • know that computers can be used to monitor supplies. • Interpret data from a spreadsheet. • Collect and inputting data into a spreadsheet. 	approximate, astronaut, digital content, experiment, interactive map, international space station, interpret, laboratory, monitor, satellite, sensor,



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		<ul style="list-style-type: none">• Create and labelling images• Develop confidence with the keyboard and the basics of touch typing.	space, survival, thermometer
Continuous	Online Safety	<ul style="list-style-type: none">• Know how to keep information safe and private online• know who we should ask before sharing things online• know how to give or deny permission online• Identify personal information• Recognise ways to be respectful to others when sharing information online• Recognise that personal information should not be shared online	offline, online, information, private, safe, trusted adult, content, permission, share