



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	<u>Improving mouse skills</u> (Computing systems)	<ul style="list-style-type: none">• know that "log in and log out" means to begin and end a connection with a computer.• know that a computer and mouse can be used to click, drag, fill and select and also add backgrounds, text, layers, shapes and clip art• know that passwords are important for security• To explore hardware to discover how it works• To identify the location of keys on a keyboard• To identify that computers and devices use inputs and outputs• To develop basic mouse skills	computer, log on/off, password, username, screen
Autumn 2	Algorithms unplugged (Programming)	<ul style="list-style-type: none">• Understand that an algorithm is when instructions are put in an exact order.• know that input devices get information into a computer and that output devices get information out of a computer.• understand that decomposition means breaking a problem into	algorithm, bug, computer, debug, device, input, instructions, output, decomposition solution



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		<p>manageable chunks and that it is important in computing.</p> <ul style="list-style-type: none"> • To know that we call errors in an algorithm 'bugs' and fixing these 'debugging' • To know that you can add data to a spreadsheet. • To use decomposition to solve simple challenges • To develop the skill of sequencing • To follow a basic set of instructions • To learn to debug an algorithm 	
Spring 1	<u>Rocket to the moon (Skills showcase)</u>	<ul style="list-style-type: none"> • Know that when we create something on a computer it can be more easily saved and shared than a paper version. • Know some of the simple graphic design features of a piece of online software. • Know that a spreadsheet is an electronic 'table' for sorting data. <ul style="list-style-type: none"> • To use a basic range of tools within graphic editing software • To create digital art using a paint tool • To develop control of a mouse • To develop an understanding of different software tools • To represent data in a simple table/spreadsheet 	computer, program, data, digital content, e-document, folder, save, sequence, share, spreadsheet
Spring 2	Bee-Bots (Programming)	<ul style="list-style-type: none"> • understand the basic functions of a Bee-Bot • know that you can use a camera/tablet to make simple videos. • know that algorithms move a Bee-Bot accurately to a chosen destination. • To program a bee bot to follow a planned route • To learn to debug instructions when things go wrong • To assemble instructions into a simple algorithm 	algorithm, computing code, computer program, explain, explore, predict, tinker, video
Summer 1	Digital Imagery (Creating Media)	<ul style="list-style-type: none"> • understand that holding the camera still and considering angles and light are important to take good pictures. • know that you can edit, crop and filter photographs. 	crop, delete, download, drag and drop, editing, import, resize, save as,



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		<ul style="list-style-type: none"> • know how to search safely for images online. • To take and edit photographs • To develop understanding of different software tools • To search and download images from the internet safely 	search engine, sequence, visual effects
Summer 2	Data Handling	<ul style="list-style-type: none"> • Know how that charts and pictograms can be created using a computer. • To understand that a branching database is a way of classifying a group of objects. • To know that computers understand different types of 'input'. • To use software to explore and create pictograms and branching databases • To use data representations to answer questions about data. • To understand that technology can be used to represent data in different ways: pictograms, tables, pie charts, bar charts, block graphs etc. 	branching database, categorise, chart, computer, data, information, label, pictogram, record, sort, table, text
Continuous	<u>Online Safety</u>	<ul style="list-style-type: none"> • know that the internet is many devices connected to one another. • know what to do if you feel unsafe or worried online - tell a trusted adult. • know that people you do not know on the internet (online) are strangers and are not always who they say they are. • know that to stay safe online it is important to keep personal information safe. • know that 'sharing' online means giving something specific to someone else via the internet and 'posting' online means placing information on the internet. • Recall what the internet is • Recognise advice to stay happy and safe online • Provide advice on ways to stay safe and happy online • Recognise how actions on the internet can affect others 	instructions, computer, internet, connection, predict, internet safety, online safety, respect, digital footprint



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