

Subject: Computing
Lead: V Crow

	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
Reception	<u>Technology Around Us/Hardware</u>	<u>Drawing Skills/Photography</u>	<u>Robots/Hardware</u>
Tools Used:	Examples of different kinds of Technology. Mouse, Keyboard, Monitor, PC, iPad, Laptop	2Paint 2PaintaPicture Camera	Floor Robots (Beebots) 2Go
National Curriculum:	Technology: children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purpose.	Technology: children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purpose.	Technology: children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purpose.
E-Safety:	Self Image and Identity – 1 session Online Relationships – 2 sessions	Online Reputation – 1 session Online Bullying – 2 sessions Health, Wellbeing, and Lifestyle – 1 session	Privacy and Security – 2 sessions Managing Online Information – 2 sessions Copyright and Ownership – 2 sessions
National Curriculum:	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	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	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

	<u>Autumn</u>			<u>Spring</u>		<u>Summer</u>	
Year 1	<u>Autumn 1</u>		<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
Unit:	<u>Introduction to Purple Mash 3 Lessons</u>	<u>Creative Computing 4 Lessons</u>	<u>Data Explorers 6 Lessons</u>	<u>Animated Stories 6 Lessons</u>	<u>Creating and Following Instructions 3 Lessons</u>	<u>Coding 6 Lessons</u>	<u>Making Beats 4 Lessons</u>
Content:	Introduction to Purple Mash Introducing Purple Mash and the essential skills for the year 1 scheme units. - Logging in and out of Purple Mash - Opening and using 2Dos - Saving work in the Work area	Developing mouse skills and ICT skills using the creative 2DIY tools in Purple Mash. - Making digital art - Making and sharing jigsaws - Making a drag and drop game	Grouping and sorting objects. Relating this to organising and interpreting data. Using pictorial data on Purple Mash. - Sorting and grouping quizzes - Understanding what data is - Representing data electronically	Creating and combining digital art and text to produce digital books using the 2Create a Story tool. - Creating digital art and text - Adding animation to images - Adding sound	Introducing block coding using 2Code. - Using blocks to code - Understanding objects, actions and events - Planning and designing a program	Introducing block coding using 2Code. - Using blocks to code - Understanding objects, actions and events - Planning and designing a program If this class has not done coding before, complete the Coding Crash Course unit instead.	Introducing the concept of digital music. - Creating sounds using 2Explore - Combining instruments using 2Beat - Composing digital music
Tools Used:	Avatar Creator Paint Projects Paint Projects	2Paint 2DIY - Puzzle 2DIY – Drag 2DIY - Multi Drag 2DIY	unplugged 2Quiz -using quizzes 2Quiz -using quizzes unplugged 2Count 2Count	TBC – Autumn term	TBC – Autumn term	TBC – Autumn term	TB – Autumn term
National Curriculum targets:	Use technology purposefully to create, organize, store, manipulate, retrieve. when they have concerns about content or contact on the internet or other online technologies.	Use technology purposefully to create, organize, store, manipulate, retrieve. when they have concerns about content or contact on the internet or other online technologies.	Use technology purposefully to create, organize, store, manipulate, retrieve. when they have concerns about content or contact on the internet or other online technologies.	TBC – Autumn term	TBC – Autumn term	TBC – Autumn term	TBC – Autumn term
Vocab	Login, logout, password, avatar, menu, burger menu, icon, homepage, alert, folder, filename, scrolling, scrollbar	digital art, drag and drop, arrow keys, touchscreen gestures, hotspot	Group, criteria, sort, data, pictogram	TBC – Autumn term	TBC – Autumn term	TBC – Autumn term	TBC – Autumn term
E-Safety afternoon	Self-Image and Identity – 2 sessions Online Relationships – 4 sessions			Online Reputation – 2 sessions Online Bullying – 1 session Health, Wellbeing and Lifestyle – 1 session		Privacy and Security – 3 sessions Managing Online Information – 2 sessions Copyright and Ownership – 2 sessions	
National Curriculum:	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			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		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	

	<u>Autumn</u>			<u>Spring</u>		<u>Summer</u>		
Year 2	<u>Autumn 1</u>		<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>	
Unit:	<u>Route Explorers</u> 4 Lessons	<u>The Internet</u> 4 Lessons	<u>Creating Pictures</u> 5 Lessons	<u>Spreadsheets</u> 6 Lessons	<u>Questioning</u> 4 Lessons	<u>Coding</u> 6 Lessons	<u>Presenting Ideas</u> 4 Lessons	<u>Making Music</u>
Content:	Coding using 2Go. Writing simple instructions to move a screen turtle along routes. - Considering direction and distance - Creating commands - Building an algorithm	Understanding what the internet is. - Defining the World Wide Web - Recognising browsers and websites - Connecting to the internet	Using a digital art tool to create art in different traditional art styles. - Using 2Paint a Picture templates - Exploring the features of each template - Compiling an online art portfolio - Comparing digital art effects to non digital effects	Introducing spreadsheets and the way they organise data using the 2Calculate tool. - Understanding cells and columns - Inserting images with values - Using totalling tools - Creating graphs	Investigating data, how it is collected and how it can be presented. - Asking the right question to collect or present data - Keeping a tally - Using 2Count to present the data - Using a branching database	Developing coding skills using 2Code. - Understanding algorithms - Introducing sequencing - Coding interaction between objects - Using timers - Debugging	Creating mind maps using 2Connect to organise and present ideas. - Using and making mind maps - Using a mind map as a presentation tool	Composing digital melodies using 2Sequence. - Understanding a digital music tool - Relating the functions to musical terms - Composing music digitally
Tools Used:	2Go	Writing Template (2Publish) 2Quiz	2Paint a Picture Writing Templates	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
National Curriculum:	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.	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.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term If this class has not done coding before, complete the Coding Crash Course unit instead.	TBC – Autumn Term	TBC – Autumn Term
Vocabulary:	Direction, Command, Instructions, Route, Algorithm, Coding, Computer bug, Debugging	Internet, World Wide Web, Browser, Modem, Router, Wi-Fi, Smart Device, Website, Webpage, Home Page, Link, Search Engine, Search Bar, Keywords	Impressionism, Palette, Style, Pointillism, Outline, De Stijl, Fill Tool, Horizontal, Vertical, Arts & Crafts, Repeating, Pattern, Roated Pattern, Symmetry, Digital, Portfolio, Import, Image Picker, Resize	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
E-Safety afternoon:	Self-Image and Identity – 2 sessions Online Relationships – 7 sessions			Online Reputation – 3 sessions Online bullying – 3 sessions Health, Wellbeing, and Lifestyle – 1 session		Privacy and Security – 4 sessions Managing Online Information – 5 sessions Copyright and Ownership – 2 sessions		
National Curriculum:	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			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		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		

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Year 3	<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>		
Unit:	<u>Email</u> <u>6 Lessons</u>	<u>Route Planners</u> <u>4 Lessons</u>	<u>Spreadsheets</u> <u>6 Lessons</u>	<u>Presenting Ideas</u> <u>5 Lessons</u>	<u>Coding</u> <u>6 Lessons</u>	<u>Micro:Bits</u> <u>4 Lessons</u>
Content:	Communicating electronically using 2Email. Considering safety aspects of email communication. - Composing and replying to emails - Opening and sending attachments - Using email safely	Using 2Go to create routes for screen turtles. Coding using angles of turn and repetition. - Writing commands using rotation - Creating algorithms and writing code - Planning routes - Repetition in 2Go	Working with data using spreadsheets in the 2Calculate tool. - Creating graphs - Understanding cell addresses - Using the formula bar - Combining 2Calculate functions to analyse data	Using industry standard software to create presentations. - Adding media - Customising with animation and timings - Designing an effective presentation	Developing coding skills using 2Code. B Using flowcharts in 2Chart - Using timers - Introducing repetition - Testing and debugging If this class has not done coding before, complete the Coding Crash Course unit instead.	Coding using a micro:bit as an external device. The software includes an emulator for use in schools without micro:bits. - Using the LED display - Sequencing and timing - Understanding inputs and outputs - Adding sounds and gestures
Tools Used:	2Email	2Go	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
National Curriculum:	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. 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 logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
Vocabulary:	Communication, email, inbox, compose, address book, recipient, attachment, trusted contact, personal information, password, email simulation	Command, Route, Algorithm, Turtle object, Rotation, Angle, Degrees, Debug/Debugging, Repeat	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
E-Safety afternoon:	Self-Image and Identity – 3 sessions Online Relationships – 6 sessions		Online Reputations – 3 sessions Online Bullying – 2 sessions Health, Wellbeing, and Lifestyle – 2 sessions		Privacy and Security – 3 sessions Managing Online Information – 6 sessions Copyright and Ownership – 1 session	
National Curriculum	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		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		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	

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Year 4	<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
Unit:	<u>Animation 6 Lessons</u>	<u>Hardware and Software 4 Lessons</u>	<u>Sound Stories 4 Lessons</u>	<u>Effective Searching 4 Lessons</u>	<u>Coding 6 Lessons</u>	<u>Micro:bit 4 Lessons</u>
Content:	Creating digital animations using the 2Animate tool. - Knowing the types of animation - Understanding onion skinning - Exploring animation features - Using storyboarding	Understanding technology and computer systems in relation to their hardware and software. - Defining types of technology - Knowing how systems work together - Identifying hardware - Understanding software	Adding narrative and sound effects to create audio books using 2Cast. - Recording audio content - Creating sound effects - Post-production editing	Exploring how to effectively search the internet. Exploring safety aspects of online information. - Using a search engine - Search rankings - Reliable searching - Search algorithms	Developing coding skills using 2Code. - Introducing selection - Exploring design properties - Introducing loops - Coding number variables If this class has not done coding before, complete the Coding Crash Course unit instead.	Coding using a micro:bit as an external device. Includes an emulator for schools without micro:bits. - Exploring sensor inputs and the accelerometer - Using variables, inputs and outputs - Coding with selection and loops
Tools Used	2Animate	2Quiz Writing template (2Publish) 2Connect	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
National Curriculum:	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 logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
Vocabulary:	Animation, Animation Software, Frame, Stop Motion, Onion Skinning, Copy Frame, Frames Per Second, Background, Sound Effect, Storyboard, Background, Copy Frame, Frame, Sound Effect, Storyboard, Evaluate, Sharing Controls	Technology, Manual Technology, Electrical Technology, Digital Technology, Smart Technology, Computer System, Hardware, Peripheral, Component, Input, Output, Storage, Software, Application (App), Program, Process	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
E-Safety afternoon:	Self-Image and Identity – 3 sessions Online Relationships – 3 sessions		Online Reputation – 2 sessions Online Bullying – 3 sessions Health, Wellbeing, and Lifestyle – 2 sessions		Privacy and Security – 4 sessions Managing online information – 6 sessions Copyright and Ownership - 2 sessions	
Key Vocab.	use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	

	<u>Autumn</u>		<u>Spring</u>		<u>Summer</u>	
Year 5	<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
Unit:	<u>Quizzing 5 Lessons</u>	<u>Game Creator 5 Lessons</u>	<u>Spreadsheets 6 Lessons</u>	<u>Word Processing 6 Lessons</u>	<u>Coding 6 Lessons</u>	<u>Micro:bit 4 Lessons</u>
Content:	Making effective quizzes using 2Quiz. Exploring types of questioning and effective presentation of a quiz. - Evaluating the features of a good quiz - Choosing appropriate question types - Making use of feedback and titles - Testing and editing quizzes	Designing and making a 3D maze adventure game using 2DIY3D. - Exploring the features of a good game - Designing and making sprites and the game world - Evaluating the playability of games	Working with data using spreadsheets in the 2Calculate tool. - Using formulae - Exploring measurement conversions - Carrying out numerical investigations - Creating computational models	Using industry standard software to create documents. - Creating documents - Using images - Entering and editing text - Using tables and templates	Developing coding skills using 2Code. - Coding efficiently by refining code - Simulating a physical system - Exploring decomposition and abstraction - Using functions and variables If this class has not done coding before, complete the Coding Crash Course unit instead.	Coding using a micro:bit as an external device. Includes an emulator for schools without micro:bits. - Exploring sensor inputs and the accelerometer - Using selection, variables, inputs and outputs - Coding for the micro:bit pins
Tools Used:	2Quiz	2DIY3D	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
National Curriculum:	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.	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.	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
Vocabulary:	Quiz, Features, Interactive, Simple, Advanced, Multiple Choice, Design, Content Page, Feedback Page, Topic, Layout, Debug, Test, Evaluate	Game genre, 2D Game, 3D Game, Game design, Sprite, Sprite Animation, Playability, Game environment, Game feedback	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
E-Safety afternoon:	Self-Image and Identity – 2 sessions Online Relationships – 5 sessions Online Reputation – 2 sessions		Online Bullying – 6 sessions Health, Wellbeing, and Lifestyle – 4 sessions Copyright and Ownership – 2 sessions		Privacy and Security – 3 sessions Managing Online Information – 9 sessions	
National Curriculum:	use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	

	<u>Autumn</u>			<u>Spring</u>		<u>Summer</u>	
Year 6	<u>Autumn 1</u>		<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
Unit:	<u>Networks</u> <u>4 Lessons</u>	<u>Blogging</u> <u>4 Lessons</u>	<u>Graphing</u> <u>4 Lessons</u>	<u>Coding</u> <u>6 Lessons</u>	<u>Micro:Bits</u> <u>4 Lessons</u>	<u>Data Detectives</u> <u>4 Lessons</u>	<u>3D Modelling</u> <u>5 Lessons</u>
Content:	Learning what networks do and how they connect devices. Considering safety aspects of networks and collaboration. - Identifying examples of networks - Recognising types of networks - Understanding internet services - Discussing positive and negative use of networks	Understanding how blogs and their features can effectively engage an audience. - Planning the theme, content and structure - Writing, editing and publishing a blog post - Understanding blog moderation - Reviewing and commenting on blog posts	Using the Data Detectives tool to work with large datasets to analyse complex data and answer questions. - Filtering and sorting data - Grouping data - Linking tables	Developing coding skills using 2Code. - Using functions - Understanding flowcharts and control simulations - Coding for user input If this class has not done coding before, complete the Coding Crash Course unit instead.	Coding using a micro:bit as an external device. - Using the micro:bit as a data logger - Measuring, recording and analysing environmental data - Collecting data and exporting to graphical software	Using the Data Detectives tool to work with large datasets to analyse complex data and answer questions. - Filtering and sorting data - Grouping data - Linking tables	Exploring computer aided design in 3D using the 2Design and Make tool. - Working with viewpoints of 3D objects - Adding and editing points on a model - Designing for a purpose
Tools Used:	2Quiz 2Connect	2Blog	2Graph 2Calculate	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
National Curriculum:	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.	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.	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
Vocabulary:	Network, LAN (Local Area Network), WAN (Wide Area Network), Router, Wi-Fi, Internet, World Wide Web (WWW), Website, Web Browser, Email, Internet Chat, Video Call, Collaborate, Respectful, Communication, Online Safety, Censorship, Firewall, Filter, Freedom of Speech, Responsible Use	Blog, Blog post, Vlog, Plan, Draft, Revise, Edit, Publish, Hyperlink, Commenting, Approval, Netiquette, Moderation	Chart, Comparative Bar Chart, Data, Dataset, Dual Bar Chart, Chart, Data, Dataset, Pie Chart, Chart, Data, Dataset, Line Graph, Comparative Bar Chart, Data, Dataset, Dual Bar Chart, Line Graph, Pie Chart	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term	TBC – Autumn Term
E- Safety afternoon:	Self-Identity and Image – 3 sessions Online Relationships – 4 sessions Online Reputation – 2 sessions			Online Bullying – 2 sessions Health, Wellbeing, and Lifestyle – 4 sessions Privacy and Security – 6 sessions		Managing Online Information – 11 sessions Copyright and Ownership – 2 sessions	
National Curriculum:	use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact			use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	