

LONG TERM PLANNING
SUBJECT: COMPUTING

Nursery		
Autumn Term	Spring Term	Summer Term
Show interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets. Can operate simple equipment e.g. press buttons on a remote control. Knows how to make toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images Follow simple instructions or respond to a simple question.	Learn to handle any devices carefully. Follow instructions to play a group game. Use simple directional language to direct others around (unplugged activity). Notice an error in a repeating pattern. Choose the right resources to carry out an activity.	Use a touch screen with adult support (whiteboard or ipad). Create digital recordings (mics, ipads, record buttons etc.) Develop a sense of responsibility within the community. Sorting materials (e.g. tidy up time)

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Reception		
Autumn Term	Spring Term	Summer term
Discuss and sign AUP	Connect ideas together verbally.	Being aware of own feelings and the feelings of others.
Use touch screen equipment (including IWB) with growing confidence.	Follow a sequence of 2 or more instructions.	Collect simple information and see it displayed using a computer.
Use toys with buttons/inputs	Build constructive relationships.	Use toys that can be controlled by input (e.g. beebots)

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Year 1					
Autum term – Key Person – Ada Lovelace		Spring Term – Key Person – Tim Berners-Lee		Summer term – Key Person – Markus Perrson	
• Intro To Purple Mash • Creative Computing • Self-Image/Getting Support • Online Bullying	• Data Explorers • Creating and Following instructions • Online reputation • Health, wellbeing and lifestyle	• Animated stories • Online relationships	• Coding • Managing information	• Technology Around us • Privacy and Security	• Making Beats • Copyright and ownership
• To login and create my own avatar on Purple Mash. • To open an activity and then save the work to the 'My Work' area. • To understand how to complete work in the 2Dos area in Purple Mash. • To use paint tools to draw a picture. • To create a jigsaw using a digital device and share it so that others can play. • To create a placing game in 2DIY	• To think carefully about the steps of grouping items. • To group items using a computer. • To sort different items. • To understand that data is information that can be collected and used. • To understand that data can be shown using pictures. • To understand that an algorithm is a set of instructions. • To follow and create simple instructions on a device.	• To understand some differences between traditional books and digital books. • To draw a character for a 2Create a Story digital book. • To understand the difference between backgrounds and other objects on the screen in 2Create a Story. • To add animation to objects in 2Create a Story. • To add text to a 2Create a Story file.	• To understand that computer programs work by following instructions called code. • To use object and action code blocks to make a computer program. • To understand what an event is in coding. • To understand the purpose of an output and to be able to 'read' code to find out what it does. • To change aspects of the design view.	• To understand the safe use of technology devices. • To know what the word technology means. • To know what technology is used in school. • To consider the purposes of technology used in the wider world. • To understand why we have passwords. • To know what personal information is and what we can/can't share online.	• To compare music made using computers and music played by real instruments. • To explore mixing the sounds of different instruments using the 2Beat tool. • To compose a tune to match a picture of a scene. • To compose a beat to match a picture of a scene. • To understand who work belongs to and how to save it representing this.

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• <i>Recognising people online can be harmful and who to turn to for support</i> • <i>To understand how to behave in a kind manner online.</i>	• To sequence algorithms that require a correct order. • Understand what information is appropriate for online and how it can be copied. • To explain rules to keep myself safe when using technology	• To add sounds to a 2Create a Story file. • To communicate online with correct support and permission • To understand why it is important to be kind and respectful online.	• To plan and make a computer program. • To know how to simply find information online but know it isn't all real and it may be a joke.		
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Year 2					
Autumn Term – Raj Reddy		Spring Term – Annie Easley		Summer Term – Charles Babbage	
• Route Explorers • Self Identity and Online Experience • The internet	• Creating Pictures • Health Wellbeing and Lifestyle • Online Relationships	• Spreadsheets • Copyright and Ownership	• Questioning • Privacy and security • Managing online information	• Coding • Online Bullying	• Presenting Ideas • Making Music • Online reputation
• To use the direction keys in 2Go to move the turtle along a route. • To use units of distance along with the direction keys in 2Go to move along a route.	• To create a digital art piece in an Impressionist style. • To create a digital art piece in a Pointillism style. • To create digital art patterns in the style of the Arts and Crafts movement. • To know how to communicate	• To understand what a spreadsheet is and how to navigate one using 2Calculate. • To explore how spreadsheets can complete calculations automatically.	• To understand how data can be used to help answer a question. • To ask an appropriate question, gather data using a tally chart and present it using digital tools.	• To create a computer program using an algorithm. • To understand ways that the collision detection event can be used in a program. • To design a program that follows a timed sequence.	• To understand that ideas can be organised and presented using a concept map. • To add information to a concept map. • To organise ideas clearly in a concept map.

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• To write instructions to complete more than one step of a route at once. • To build up instructions for a longer route. • To understand how the internet, the World Wide Web and a browser work together. • To understand the different types of hardware used to access the internet and their functions. • To understand the difference between a website and a webpage and use a school website to find information. • To understand the difference between a browser and a search engine, and to practise	online and the risks this might entail. • To know how and when to share information online and how it can identify me. • To know who can help me if I feel pressure online. • To explain simple guidance for using technology in different environments and settings	• To create and interpret block diagrams from data.	• To begin to explore how yes or no questions can be used to sort data. • To understand how branching databases work and practise navigating them to find answers. • To know why we use passwords • To know what private means and how to keep information private. • To know about internet connected devices. • To navigate a simple webpage and use key words in searches. • To understanding what voice activated searching is. • To know what is fake and real online.	• To understand that different objects have different attributes (properties). • To understand the function of button objects in a program. • To understand the importance of testing and debugging. • To know what bullying is and who is to blame. • To know how to help someone being bullied.	• To use a concept map to present ideas to others. • To explore, edit and combine sounds using 2Sequence. • To improve a tune and make music based around a feeling. • To compose background music for a video. • To know how information online stays for a long time and can be seen by others. • To know where to get support if something online is wrong or not allowed to be there.
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searching for information safely. - To understand people can act differently online and offline. - To know how to get help if someone is sad or worried online.					
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Year 3					
Autumn Term		Spring Term		Summer term	
Computing Systems and networks Connecting Computers Identifying that digital devices have inputs, processes and outputs and how devices can be connected to make networks.	Creating Media Stop frame animation Capturing and editing digital still images to produce a stop-frame animation that tells a story	Programming A Sequencing Sounds Creating sequences in a block-based programming language to make music	Data and information Branching databases Building and using branching databases to group objects using yes/no questions.	Creating media Desktop Publishing Creating documents by modifying text, images and page layouts for a specific purpose.	Programming B Events and actions in programs Writing algorithms and programs that use a range of events to trigger sequences of actions.