Year 1 - Progression of Knowledge and Skills IT

Term	Knowledge	Skills
Autumn 1 – Introduction Purple Mash	• It is important to log in to a site, the importance of keeping passwords safe and the need to log out at the end of a session. • An avatar is a virtual representation of a person suitable for use online. • The 2Do system allows teachers to assign tasks to children within Purple Mash. • Online sites have a main page called the homepage. • Online sites often use an alert system to communicate with the user. • To move to a different activity in Purple Mash, you must first close the current activity. • Many online sites, including Purple Mash, have an area for an individual's work that is accessible only to the individual (and in Purple Mash to their teacher as well). • To access Purple Mash programs, you use the Tools area • You can access non-visible parts of a screen using scrolling • You can use a physical or on-screen keyboard to type up	• Access Purple Mash from home and school. • Log out of Purple Mash. • Give reasons why it is important to keep a password safe and not share it with other people. • Make and edit their own avatar • Open 2Dos. • Save 2Dos. • Hand in 2Dos and communicate with their teacher via the 2Do Access the Purple Mash homepage when on the site. Access alerts within Purple Mash. • Open a specified tool. • Scroll up and down and from side to side where applicable. • Type upper and lower-case letters and spaces using the device available.

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Technology Around Us	• Technology is something that uses scientific knowledge to solve problems or invent useful tools. • Technology is used within many environments. • Not all technology is digital technology. Digital Technology is a subset of technology for sharing information • The word hardware is used to describe the physical parts of a digital technology device. • It is important to use technology safely and that there are some risks associated with the use of technology.	• Recognise examples of technology. • Describe the purpose of common types of technology. • Identify technology within school, at home and in the wider world. Explain how this technology is helpful. • Give examples of digital technology and contrast this with technology. • Name examples of technology hardware including peripheral devices • Use devices safely. • Point out the risks of situations involving technology
Autumn 2 – Data Explorers	• Items can be grouped using a range of criteria, and a logical process should be used when doing so. • Digital tools can be used to group images of items. • Sorting is a way to organise items. • Sorting and grouping have different meanings. • Data is information that can be collected and used.	• Identify criteria that can be used to sort items into groups. Sort items using criteria. • Logically sort items into groups. • Complete grouping questions in 2Quiz using given criteria. • Complete sequencing questions in 2Quiz using given sorting criteria.

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Autumn 2 – Data Explorers	• Data can be represented digitally using pictures. • Before collecting data, you must think about how it can be used and what information to collect.	• Decide whether it is better to sort or group items to organise them. • Identify items to be grouped or sorted as examples of data that can be organised. • Use data grouping and sorting to answer questions. • Create a pictogram using data from the class in 2Count. Answer questions about the class using a pictogram. • Collect and record data. • Input the data into the 2Count tool. • Make a pictogram using 2Count. • Answer questions using the pictogram
Spring 1 – Creating and Following Instructions	• To achieve a specific effect when building something, accurate instructions must be followed. • Computer programs need precise instructions to follow and these are called algorithms. • If instructions are vague, outcomes will vary for a given task. • The order of instructions for a task affects the results. • Correcting errors in an algorithm or program is called debugging.	• Think carefully about how to word oral instructions to achieve a desired outcome. • Give clear, precise and concise instructions for someone to follow. • Test whether instructions have been followed by comparing the outcome to the instructions. • Examine instructions to see where confusion might have arisen

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Spring 1 – Creating and Following Instructions		• Use a computing device to follow simple instructions in a painting project. • Examine the outcomes of following instructions to check for differences in interpretation. • Decide whether any differences were due to the clarity of the instructions or the end user. • Identify when a sequence of instructions is incorrect and why. • Explore the possible outcomes of following incorrectly sequenced instructions. • Find errors in a simple algorithm. • Correct an algorithm sequence by reordering it. • Recognise when an algorithm has been debugged. • Apply learning about debugging an algorithm to other incorrectly sequenced instructions, such as baking cakes

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Spring 2 – Making Beats	There are differences between music played using musical instruments and digitally created music. Digital tools such as 2Explore and 2Beat can be used to compose music. Digital music tools can be used to change aspects of the composition. Digital music tools can be used to create the sound of multiple instruments at once Different digital tools are better for different purposes.	• Identify differences and similarities between music played using instruments and digitally composed music. • Compose a melody using 2Explore. • Select sounds from the available libraries. • Compose a beat using 2Beat. • Use digital music tools to change the tempo, volume, looping and length of music compositions. • Use 2Beat to compose an interaction of different instrument sounds • Select the best music tool for their compositions
Summer 1 – Animated Stories	• There are differences between traditional books and digital books. • Images can be created within digital book software. • Digital books can have animations. • Copying and pasting is a term used in computing when things are copied from one place to another. • Audio such as sound effects, voice recordings and music can be included within digital books.	• Identify differences and similarities between traditional books and digital books. • Use the painting tools within 2Create a Story. Use picture editing tools such as 'undo' and the 'eraser' to improve created images.

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Summer 1 – Animated Stories	• Backgrounds are static images in contrast to the animated foreground. • The style of digital text is called the font. This can be changed after typing the text.	• Apply animation effects to images in 2Create a Story. Choose effects that make characters appear to interact. • Copy and paste in 2Create a Story. Organise and copy pages in a digital book. • Record sound for 2Create a Story pages. Insert sound effects and music into a 2Create a Story book • Add backgrounds to 2Create a Story pages. • Change the font and size of typed text.
Summer 2 – Coding	• Computer programs work by following instructions called algorithms. These are written as computer code that the computer can interpret. • In 2Code, code is created using coloured code blocks. • Code view is the place in 2Code where you see and use the blocks of code. • Each single instruction such as 'Object Right' is called a command. • To make an algorithm happen, you must execute, or run, the code.	• Create instructions in the form of simple algorithms with attention to the order and the level of detail. • Interpret what a piece of code means. • Recognise object code blocks in 2Code are light blue. • Recognise action code blocks in 2Code are dark blue. • Recognise event code blocks in 2Code are green.

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Summer 2 – Coding	• An event is something that makes a block of code run in response to an action such as a user pressing a key or clicking a screen. • Debugging is the name for fixing code that isn't working how it was designed to work. • The look of a program in 2Code is created in the Design View using backgrounds and objects • Program design is the first stage to making a well thought out program	• Recognise output code blocks in 2Code are purple. • Switch to code view. • Code blocks are dragged into the coding area to create commands. • Understand how code blocks fit together to create a command. • Make a simple command in 2Code by using an object and action together. • Execute the code to see the effect by clicking Run. • Use the 'When Clicked' event code block. • Position a command inside a 'When Clicked' event code block. • Give an object an action that occurs when it is clicked. • Test 'When Clicked' events • Begin to use logical reasoning to find where bugs in the code are. • Fix bugs in code. • Test whether bugs have been fixed. • Switch to design view. • Choose background images. • Add objects and modify some attributes such as scale • Plan what objects in a scene will do.

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Summer 2 – Coding		• Recognise that this is the algorithm for the program. • Use own design to code a program. • Debug the program against the design specifications.