Subject Overview

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Reception	Learning and exploring purple mash Using paint	Pictograms Online safety	Animated book (2 create a story) Recording voice (mini mash cams)	Using technology to learn new facts Ipad - Purple Mash Mini mash simple city – non-fiction videos. Computer – fact finding.	Coding Beebots and 2 go.	Laptops
Year 1	Online safety and group sorting	Pictograms and spread sheets	Lego builders Maze explorers	Animated story books	Coding	Spreadsheets Technology outside of school
Year 2	Coding	Online safety	spreadsheets	questioning	Effective searching Creating pictures	Making music Presenting ideas

Progression of Knowledge

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Reception	Opportunities to explore the other Painting tools. Use the tools: Simple Slice, Spinner, Wet Paint, Swirly Use the above painting tools to and think about how which tool you would use to create different pictures and patterns. Change the size of the brush to make thick and thin lines.	To know what a pictogram is. To look at existing pictograms and talk about what they show. To understand that information can be show as an image. Choose a topic to create a pictogram with the children. To talk about how to keep ourselves safe on the computer. To know what personal information is. To say what we would do if we were not safe.	Opportunities for children to express themselves through other characters. opportunity to talk with others by taking on a character's role and speaking in the style of the character. Recording the children being the character and listening to themselves taking on the role. Opportunity to explore the program and make a front cover. Make a class story based on a story you are reading about, or a new story that you are going to write as a class.	Make comparisons and compare the differences based on what has been seen. Children about all the things they know about a topic. To find comparisons between their own experiences and environments and those of those around them.	Show the children how they can make the object move around and what the direction tools do. • Talk to the children about where they want the character to move to and how it is going to get there. • Give the character one instruction at a time and see what happens. • Ask the children what they think will happen when you press one of the direction keys.	Know the role of a keyboard. Recognise the letters. Opportunity to explore using a mouse. Explain what a laptop does. Opportunity to type their name.
Year 1	To log in safely. • To learn how to find saved work in the Online Work area and find teacher comments.	To sort items using a range of criteria. • To sort items on the computer using the	To compare the effects of adhering strictly to instructions to completing tasks without complete	To introduce e-books and the 2Create a Story tool. • To add animation to a story.	To understand what instructions are and predict what might happen when they are followed.	To know what a spreadsheet program looks like. • To locate 2Calculate in Purple Mash.

	• To learn how to search Purple Mash to find resources. • To become familiar with the icons and types of resources available in the Topics section. • To start to add pictures and text to work. • To explore the Tools and Games section of Purple Mash. • To learn how to open, save and print. • To understand the importance of logging out.	'Grouping' activities in Purple Mash. To understand that data can be represented in picture format. • To contribute to a class pictogram. • To use a pictogram to record the results of an experiment.	instructions. • To follow and create simple instructions on the computer. • To consider how the order of instructions affects the result. To understand the functionality of the direction keys. • To understand how to create and debug a set of instructions (algorithm). • To use the additional direction keys as part of an algorithm. • To understand how to change and extend the algorithm list. • To create a longer algorithm for an activity. • To set challenges for peers. • To access peer challenges set by the teacher	• To add sound to a story, including voice recording and music the children have composed. • To work on a more complex story, including adding backgrounds and copying and pasting pages. • To share e-books on a class display board. To introduce e-books and the 2Create a Story tool. • To add animation to a story. • To add sound to a story, including voice recording and music the children have composed. • To work on a more complex story, including adding backgrounds and copying and pasting pages. • To share e-books on a class display board.	• To use code to make a computer program. • To understand what object and actions are. • To understand what an event is. • To use an event to control an object. • To begin to understand how code executes when a program is run. • To understand what backgrounds and objects are. • To plan and make a computer program.	• To enter data into spreadsheet cells. • To use 2Calculate image tools to add clipart to cells. • To use 2Calculate control tools: lock, move cell, speak and count. To walk around the local community and find examples of where technology is used. • To record examples of technology outside school.
Year 2	To understand what an algorithm is. • To create a computer program using an algorithm. • To create a program using a given design. • To understand the collision detection event. • To understand that	To know how to refine searches using the Search tool. • To use digital technology to share work on Purple Mash to communicate and connect with others locally. • To have some	To use 2Calculate image, lock, move cell, speak and count tools to make a counting machine . • To learn how to copy and paste. • To use the totalling tools. • To use a spreadsheet for money calculations.	To learn about data handling tools that can give more information than pictograms. • To use yes/no questions to separate information. • To construct a binary tree to identify items. • To a binary tree	To understand the terminology associated with searching. • To gain a better understanding of searching on the Internet. • To create a leaflet to help someone	To make music digitally using 2Sequence. • To explore, edit and combine sounds using 2Sequence. • To edit and refine composed music. • To think about how music can be used to express feelings and create tunes which depict feelings.

	algorithms follow a sequence. • To design an algorithm that follows a timed sequence. • To understand that different objects have different properties. • To understand what different events do in code. • To understand the function of buttons in a program. • To understand and debug simple programs	knowledge and understanding about sharing more globally on the Internet. • To introduce Email as a communication tool using 2Respond simulations. • To understand how we should talk to others in an online situation. • To open and send simple online communications in the form of email. • To understand that information put online leaves a digital footprint or trail. • To identify the steps that can be taken to keep personal data and hardware secure.	• To use the 2Calculate equals tool to check calculations. • To use 2Calculate to collect data and produce a graph.	database to answer questions. • To use a database to answer more complex search questions. • To use the Search tool to find information.	search for information on the Internet. • To learn the functions of the 2Paint a Picture tool. • To learn about and recreate the Impressionist style of art (Monet, Degas, Renoir). • To recreate Pointillist art and look at the work of pointillist artists such as Seurat. • To learn about the work of Piet Mondrian and recreate the style using the lines template. • To learn about the work of William Morris and recreate the style using the patterns template. • To explore surrealism and eCollage	• To upload a sound from a bank of sounds into the Sounds section. • To record and upload environmental sounds into Purple Mash. • To use these sounds to create tunes in 2Sequence. To explore how a story can be presented in different ways. • To make a quiz about a story or class topic. • To make a fact file on a non-fiction topic. • To make a presentation to the class.

Progression of Skills

	Computer science	Information technology	Digital literacy
Reception	Children understand what instructions are and these can be used to make things work. Children explore and have the opportunity to program some simple instructions. Children can read some simple code (images and arrows) to follow simple instructions.	Children are able to use a range of tools. Children can open a familiar program that is know to them and explore. With support children can log into a program. Children are aware of why we need passwords.	Children can name technology. Children can give some simple reasons as to why we use technology.
Year 1	Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that an algorithm written for a computer is called a program. Children can work out what is wrong with a simple algorithm when the steps are out of order, e.g. The Wrong Sandwich in Purple Mash and can write their own simple algorithm, e.g. Colouring in a Bird activity. Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code, e.g. Bubbles activity in 2Code. When looking at a program, children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can, for example, interpret where the turtle in 2Go challenges will end up at the end of the program.	Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources, use Purple Mash 2Quiz example (sorting shapes), 2Code design mode (manipulating backgrounds) or using pictogram software such as 2Count.	Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.
Year 2	Children can explain that an algorithm is a set of instructions to complete a task. When designing simple programs, children show an awareness of the	Children demonstrate an ability to organise data using, for example, a database such as 2Invesitigate	Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching

	need to be precise with their algorithms so that they can be successfully converted into code. Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors, e.g. Debug Challenges: Chimp. Children's program designs display a growing awareness of the need for logical, programmable steps. Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause and effect sentence of what will happen in a program.	and can retrieve specific data for conducting simple searches. Children are able to edit more complex digital data such as music compositions within 2Sequence. Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.	beyond the classroom. They can share this knowledge, e.g. 2Publish example template. Children make links between technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs. Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to the Purple Mash display board. They develop an understanding of using email safely by using 2Respond activities on Purple Mash and know ways of reporting inappropriate behaviours and content to a trusted adult.

Progression of Vocabulary

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Reception	Draw Paint Tools Rubber Simple Slice, Spinner, Wet Paint, Swirly	Pictogram Pictures Most Least number	Page Slide Picture Words/text ebook Character Voice instructions	Program Facts Information topic	Instructions Direction Forwards Backwards Right turn Left turn	Log in User name Password Log out My work Keyboard Keys Mouse Mouse pad.
Year 1	Log in User name Password Log out My work Avatar Notification Topics Sort criteria	Pictogram Data Collate	Instruction Algorithm Computer Program debug	Direction Challenge Arrow Undo Rewind Forwards Backwards Right turn Left turn Debug Instruction Algorithm	Animation Ebook Font File Sound effect Display board	Action Algorithm Background Code Command Event Instructions Output Scale Scene When clocked Run Object Execute Command De-bug/debugging

						Input Properties sound
Year 2	Action Algorithm Background Button Collison detection De-bug/debugging Design mode Event Design mode Key pressed Nesting Object Predict Properties Run Scale See Sound Sequence When clicked/swiped Test Text timer	Search Display board Internet Sharing Email Attachment Digital footprint	Back space Copy and paste Columns Cells Count tool Delete key Equals tool Imagine tool box Lock tool Move cells tool Rows Speak tool Spread sheet	Pictogram Question Data Collate Binary tree Avatar data base	Internet Search Search engine Impression Palette Pointillism Share Surrealism Template	BPM Composition Digitally Music Instrument Sound effects Sound track Tempo volume concept map presentation quiz node animated non fiction narrative audience