Computing
Skills, Knowledge and Vocabulary Progression

Year 1

	Autumn 1
Vocabulary 1:1 Online safety and exploring Purple Mash (4 weeks)	**Log in** **Username** **Password** **Avatar** **My Work** **Log out** **Save** **Notification** **Topics** **Tools**
Knowledge 1:1 Online safety and exploring Purple Mash (4 weeks)	I know the following icons: **Save, Print, Open and New.** Children can save work into the 'My Work' folder in Purple Mash and understand that this is a private saving space just for their work. To understand why creating their own avatar is useful. To understand the importance of logging out when they have finished. Children will know how to use the different icons to add pictures and text to their work.

Skills 1:1 Online safety and exploring Purple Mash (4 weeks)	To log in safely. To learn how to search Purple Mash to find resources. To start to add pictures and text to work. To explore the Tools and Games section of Purple Mash Children can login to Purple Mash using their own login. Children can add their name to a picture they created on the computer. Children can logout of Purple Mash when they have finished. Children can find their saved work in the Online Work area of Purple Mash. Children can find messages that their teacher has left on Purple Mash.
Vocabulary 1:2 Grouping and Sorting (2 weeks)	**Sort** **Criteria**
Knowledge 1:2 Grouping and Sorting (2 weeks)	To know different objects can be grouped together by: size, colour, or the number of sides an object has. To understand why we use different 'criteria' to group objects. To know the criteria being used to sort objects depends on the objects being sorted: eg, if sorting fruit, we wouldn't sort them based on their number of sides – we would sort them based on their colour or their name.
Skills	To sort items using a range of criteria.

1:2 Grouping and Sorting (2 weeks)	To sort items on the computer using the 'Grouping' activities in Purple Mash.
	Autumn 2
Vocabulary **1:3 Pictograms** (3 weeks)	**Pictogram** **Data** **Collate** **Frequency**
Knowledge **1:3 Pictograms** (3 weeks)	To understand that data can be represented in picture format. Children can discuss what the pictogram shows. To understand pictograms can be used to give information.
Skills **1:3 Pictograms** (3 weeks)	Children can represent the results as a pictogram. Children can collect data from rolling a die 20 times and recording the results. To use a pictogram to record the results of an experiment. To contribute to a class pictogram. Children can discuss and illustrate the transport used to travel to school --Children can use these illustrations to create a simple pictogram Children can contribute to the collection of class data. To be able to add or delete columns (on pictogram). To be able to add or delete pictures on a pictogram.
Vocabulary 1:4 Lego	**Instruction** **Algorithm** **Computer**

Builders (3 weeks)	**Program** **Debug**
Knowledge 1:4 Lego Builders (3 weeks)	Children understand the importance of following instructions . Children know that to achieve the effect they want when building something, they need to follow accurate instructions. Children know that by following the instructions correctly, they will get the correct result. Children know that an algorithm is a precise, step-by-step set of instructions used to solve a problem or achieve an objective. Children can explain the effect of carrying out a task with no instructions. Children know that computers need precise instructions to follow. Children know that an algorithm written for a computer to follow is called a program. To know how the order of instructions affects the result. Children understand how the order in which the steps of a recipe are presented affects the outcome. Children know that correcting errors in an algorithm or program is called 'debugging'.
Skills 1:4 Lego Builders (3 weeks)	To follow and create simple instructions on the computer. Children can follow instructions in a computer program. Children can organise instructions for a simple recipe.
	Spring 1
Vocabulary 1:5 Maze Explorers (4 weeks)	**Direction** **Challenge** **Arrow** **Undo** **Rewind** **Forward** **Backwards** **Right turn** **Left turn**

	Debug **Instruction** **Algorithm**
Knowledge 1:5 Maze Explorers (4 weeks)	To understand the functionality of the direction keys. To understand how to create and debug a set of instructions (algorithm). To understand how to change and extend the algorithm list. To know how to access peer challenges set by the teacher as 2dos. Children know how to undo their last move. Children know how to use the direction keys in 2Go to move forwards, backwards, left and right. Children know how to add a unit of measurement to the direction in 2Go Challenge 2. Children know how to move their character back to the starting point.
Skills 1:5 Maze Explorers (4 weeks)	To use the additional direction keys as part of an algorithm. To create a longer algorithm for an activity. To set challenges for peers To be able to use the direction keys to complete the challenges successfully. Children can use diagonal direction keys to move the characters in the right direction. Children can challenge themselves by using the longer algorithm to complete challenges. Children can change the background images in their chosen challenge and save their new challenge.
	Spring 2
Vocabulary 1:6 Animated story books (5 weeks)	**Animation** **E-Book** **Font** **File** **Sound Effect** **Display Board**

Knowledge !:6 Animated story books (5 weeks)	Children know the difference between a traditional book and an e-book. Children know how to continue working on a previously saved story. Children know they can save their changes and overwrite the file.
Skills !:6 Animated story books (5 weeks)	Children can use the different drawing tools to create a picture on the page. Children can add text to a page and change the colour, font and size of the text. Children can save their work. Children can open work that they saved in my last lesson. Children can add an animation to their picture. Children can play the pages they have created. Children can add a sound to the page. Children can add their own voice recording to the page. Children can create their own music and add it to their page. Children can enhance the features of their story book by adding additional pages and animations. Children can share their storybook on a class story book display board. Children can add a background to the page. Children can copy and paste a page in the book.
	Summer 1
Vocabulary 1:7 Coding (6 weeks)	**Action** **Background** **Button** **Character** **Code block** **Code Design** **Coder** **Coding** **Collision Detection** **Command** **Design Mode** **Input** **Object** **Program** **Properties** **Scale** **Stop command**

	Sound **When clicked** **When Key**
Knowledge **1:7 Coding** **(6 weeks)**	Children can explain what coding means. Children know that for the computer to make something happen, it needs to follow clear instructions. Children can explain what a block of code is. Children can read through combined blocks of code. To know how to use Design Mode to add and change backgrounds and characters. They will use the Properties table to change the look of the objects. To know how to use the Properties table to change the look of the objects. Children can make a background using Design Mode. Children can add characters using Design Mode. Children can use the drop-down menu to change backgrounds and characters. To know how to design a scene for a program. To use code blocks to make the characters move automatically when the green Play button is clicked. To add an additional character who moves when clicked. To understand the use of the When Key and When Swiped commands (on tablets if available). To use the Stop button to make characters stop when the background is clicked. Children can program a character to move given a variety of input events.
Skill **1:7 Coding** **(6weeks)**	To build one- and two-step instructions using the printable code cards. To create unambiguous instructions like those required by a computer. | Children can design a simple program and then create the program using 2Code. Children can write a program that controls how a character will move. Children can make a character move when clicked. Children can use collision detection to make objects interact. Children can program a sound to play when objects collide.
	Summer 2
Vocabulary 1:8 Spreadsheets (3 weeks)	**Arrow keys** **Backspace key** **Cursor** **Columns** **Clipart** **Count Tool** **Delete key** **Image Toolbox Lock tool**

	Move cell tool **Rows Speak Tool** **Spreadsheet**
Knowledge 1:8 Spreadsheets (3 weeks)	Children can explain what rows and columns are. Children know how to give images a value that the spreadsheet can use to count them. Children know how to add the count tool to count items. Children know how to add the speak tool so that the items are counted out loud. Children know how to use a spreadsheet to help work out a fair way to share items .
Skill 1:8 Spreadsheets (3 weeks)	Children can navigate around a spreadsheet. Children can save and open sheets. Children can enter data into cells. Children can open the Image toolbox and find and add clipart. • Children can use the 'move cell' tool so that images can be dragged around the spreadsheet. Children can use the 'lock' tool to prevent changes to cells.
Vocabulary 1:9 Technology outside school	**Technology**

(2 weeks)	
Knowledge 1:9 Technology outside school (2 weeks)	Children understand what is meant by 'technology'. Children have considered types of technology used in school and out of school. Children have recorded 4 examples of where technology is used away from school.
Skill 1:9 Technology outside school (2 weeks)	To walk around the local community and find examples of where technology is used.