Robins Lane Primary School
Computing Curriculum Map

	Autumn			Spring		Summer
Year 1	_Safe and responsible use_ _Purple Mash unit: Online Safety_ Children will learn how to logon to computers using logins and understand the importance for logins. Children will learn how to log in to Purple Mash using their own login. Children will create their own avatar and understand why they are used. Children to learn how to add their name to a picture they created on the computer. They are also beginning to develop an understanding of ownership of work online.	_Digital Society_ _Purple Mash unit: Technology in our lives._ Children will explore the local community and see how technology is used in our lives. They will explore how technology supports at home and the impact this has on everyday life. Children will think about what life would be like without technology, reflecting on the positives and negatives of the internet. Children to compare to their prior learning, exploring how they can ensure that they stay safe online at home. They will explore who they can speak to and share any concerns they might have.	_Digital Literacy_ _Purple Mash unit: Digital stories_ In this unit, children will design and e-book. Children will learn the difference between a book and an e-book. They will plan, design and create their e-book and evaluate the outcome. They will learn how to add text and images to their e-book. Once complete, children will edit their e-books to incorporate sound and animation. The children will learn how to save and store their work.	_Handling Data_ _Purple Mash unit: Pictograms_ Children will be introduced to pictograms and looking at how they can be used to represent data. The children will contribute to their class data collection and they will illustrate this in a simple pictogram. The children will work to represent data in picture form and build their confidence in representing their findings in a pictogram. _Purple Mash unit: Spreadsheets_ Children will navigate around a spreadsheet. Children will learn how to explain what rows and columns are. They will save and open sheets. Children will learn how to enter data into cells. They will explore how to open the Image toolbox and find and add clipart. Children will use the 'move cell' tool so that images can be dragged around the spreadsheet. They will learn how to use the 'lock' tool to prevent changes to cells.	_Multimedia_ _Purple Mash unit: Maze explorers_ Children will learn that to achieve the effect they want when building something, they need to follow accurate instructions. They know that by following the instructions correctly, they will get the correct result. They will learn that an algorithm is a precise, step-by-step set of instructions used to solve a problem or achieve an objective. They will follow instructions in a computer program. Children will explain the effect of carrying out a task with no instructions. Children learn that computers need precise instructions to follow. They learn that an algorithm written for a computer to follow is called a program. _Purple Mash unit: Lego Builders_ This unit encourages children to begin to think logically about scenarios. Children will be introduced to the term 'algorithm'. This concept is at the core of coding. Children will be following instructions to build something; they will begin to understand the importance of following	_Coding_ _Purple Mash unit: Coding_ Children will learn what coding means and why we use coding. Children will think about how coding is used in everyday life and what they use at home that involves levels of coding and programming. Children will explain what a block of code is and learn to read through combined blocks of code. Children will make a background using Design Mode and add characters using Design Mode. Also, they will learn to use the drop-down menu to change backgrounds and characters. Children will design a simple program and then create the program using 2Code and write a program that controls how a character will move. They will learn how to make a character move when clicked.

					precise instructions with accuracy.	
Year 2	*Safe and responsible use* *Purple Mash unit: Online safety* Children will learn how to refine searches using the Search tool when exploring the internet In lessons, children will focus on how to share work electronically using the display boards. As a form of assessment, children will learn ways to use digital technology to share work on Purple Mash to communicate and connect with others locally. They will gather some knowledge and understanding about sharing more globally on the Internet.	*Digital Society* *Purple Mash unit: Effective searching* Children will explore how to search effectively using search engines. They will compare search engines in school to those used at home. They will explore the dangers of age related search engines and explore how to combat these issues. Children will learn how to use the safe-search tool within internet explorer to ensure that they are safe online as all times. Children will learn how to search effectively using key words. They will refer back to prior learning to ensure that understand that some searches need to be secure.	*Digital Literacy* *Purple Mash unit: Presenting Ideas* Children will explore the ways in which digital content can be presented such as through a mind map, a quiz, e-book or fact file. Children will create a quiz based on a familiar traditional tale. The children will explore how to enhance their fact file through adding clipart and photos to their work. As children become confident in presenting their ideas, they will use a variety of software to manipulate and present digital content.	*Handling Data* *Purple Mash unit: Questioning* In this unit, children will gain an understanding of the information on pictograms and how this can be used. Children will use pictograms to respond to simple yes/no questions. Children will design a binary tree to sort pictures and then respond to questions accurately about the binary tree they created.	*Multimedia* *Purple Mash unit: Creating Pictures and Making Music* Children will understand what 2Sequence is and how it works. They will use the different sounds within 2Sequence to create a tune. Children have explore how to speed up and slow down tunes. They will learn what happens to the tune when sounds are moved. Children have added sounds to a tune they've already created to change it. They will consider how music can be used to express feelings. Children will learn to change the volume of the background sounds. Finally, they will create two tunes which depict two feelings.	*Coding* *Purple Mash unit: Coding* Children will; explain that an algorithm is a set of instructions and describe the algorithms they created. They will explain that for the computer to make something happen, it needs to follow clear instructions and know that the Turtle and Character objects have different properties and move in different ways. They will begin to make choices about which object type to use and will begin to understand that the Repeat and Timer commands both make objects repeat actions but function differently and the type of object can affect which is the best command to use. Children will include a button in their programs and explain what debug (debugging) means. Children will have a clear idea of how to use a design document to start debugging a program and will debug simple programs. They will explain why it is important to save their work after each functioning iteration of the program they are making.
Year 3	*Safe and responsible use* *Purple Mash unit: Online Safety* Children will learn that some information held on websites may not be accurate or true. They will begin to understand how to search the Internet and how to think critically about the results that are returned.	*Digital Society* *Purple Mash unit: E-mail* Children will list a range of different ways to communicate and they will use 2Connect to highlight the strengths and weaknesses of each method. Children will learn how to access e-mails and how to open and respond to them. Children will refer back to	*Digital Literacy* *Purple Mash unit: Presenting* Children will gain an understanding of what a presentation is through either PowerPoint or Google Slides. The children will gain an understanding of how to add text and shapes to a page. Children will explore how to edit pictures within a	*Handling Data* *Purple Mash unit: Spreadsheets and Graphs* Children will create a table of data on a spreadsheet. They will use a spreadsheet program to automatically create charts and graphs from data. They will use the 'more than', 'less than' and 'equals' tools to compare different numbers and help	*Multimedia* *Purple Mash unit: Simulations* Children will learn that a computer simulation can represent real and imaginary situations. They will give some examples of simulations used for fun and for work. Children will give suggestions of advantages	*Coding* *Purple Mash unit: Coding* Children will create a design that represents a sequential algorithm and use a flowchart design to create the code. They will learn to explain what Object, Action, Output, Control and Event are in computer programming. Children will explain how their program

	Children will access and assess a 'spoof' website, giving feedback on how this website is inadequate. Children will design and create their own 'spoof' webpage mock-up and share their mock up designs with partner to peer assess work. *Digital Literacy* *Purple Mash unit: Touch type* In this unit, children will focus on typing skills using 2type. The children will learn correct posture and how to use both hands to type. The children will focus on methods of typing, learning how to use fingers to match each row on the keyboard. Children will think about how to type quickly. They will learn how to use shortcuts to structure their presentations. The children will finish by typing up a piece of work of their choice and presenting it in their own personalised design.	prior learning and create an online safety brochure for children. This brochure will then be attached to e-mails and shared with their peers. Children will learn what CC means and how they can add other recipients to the e-mail.	slide. In addition, children will be challenged to insert video, audio and animations to make their presentations more engaging.	to work out solutions to calculations. Children will use the 'spin' tool to count through times tables. They will describe a cell location in a spreadsheet using the notation of a letter for the column followed by a number for the row. Children will find specified locations in a spreadsheet.	and problems of simulations. They will explore a simulation and use a simulation to try out different options and to test predictions. Children will begin to evaluate simulations by comparing them with real situations and considering their usefulness and will recognise patterns within simulations and make and test predictions. Children will identify the relationships and rules on which the simulations are based and test their predictions. Finally, they will evaluate a simulation to determine its usefulness for purpose. *Multimedia* *Purple Mash unit: Branching Databases* Children will gain an understanding of what a branching database is and its use. The children will answer yes/no to given questions about the database they are exploring. The children will contribute to a class branching database and be challenged to edit and adapt a database to accommodate new entries. Children will end their unit by independently creating a branching database.	simulates a physical system, i.e. my vehicles move at different speeds and angles and how to describe what they did to make their vehicle change angle. Children will show that their vehicles move at different speeds and make use of the X and Y properties of objects in their coding. Children will create an if statement in their program and use a timer and if statement to introduce selection in their program. Children will show how their character repeats an action and explain how they caused it to do so and they will begin to understand how the use of the timer differs from the repeat command and can experiment with the different methods of repeating blocks of code and explain how they made objects repeat actions.
Year 4	*Safe and responsible use* *Purple Mash unit: Online Safety* Children will learn that security symbols such as a padlock protect their identity online are there to ensure they remain safe online. They will learn the meaning of the term 'phishing' and are	*Digital Society* *Purple Mash unit: Effective searching* Children will role-play the job of a journalist in a newsroom. They will interpret a variety of incoming communications and used these to build up the details of a story. They will use the incoming	*Digital Literacy Purple Mash unit: Writing for different audiences* Children will look at and discuss a variety of written materials where the font size and type are tailored to the purpose of the text. Children will use text formatting to make a piece	*Handling Data* *Purple Mash unit:* *Spreadsheets and Graphs* Children will use the number formatting tools within 2Calculate to appropriately format numbers. They will add a formula to a cell to automatically make a calculation in that cell. They	*Multimedia* *Purple Mash unit:* *Animations* Children will put together a simple animation using paper to create a flick book. They will develop an understanding of animation frames. Children will then make a simple animation	*Coding* *Purple Mash unit: Coding* Children will learn to read and understand code and remix code to achieve a particular outcome. The children will focus on debugging and how to improve a program to create the intended outcome.

	aware of the existence of scam websites. Children will explain what a digital footprint is and how it relates to identity theft, giving examples of things that they wouldn't want to be in their digital footprint.	information to write their own newspaper report. Children will use 2Connect to mind-map ideas for a community campaign. Children will use these ideas to write a persuasive letter or poster as part of the campaign and e-mail these to correspondents.	of writing fit for its audience and purpose. They will use 2Connect to mind-map ideas for a community campaign. The children will use these ideas to write a persuasive letter or poster as part of the campaign. They will then assess their texts using criteria to judge their suitability for the intended audience.	will use the timer, random number and spin button tools. Children will combine tools to make fun ways to explore number. Children will use a series of data in a spreadsheet to create a line graph. They will use a line graph to find out when the temperature in the playground will reach 20°C. Children will make practical use of a spreadsheet to help them plan actions. · Children will use the currency formatting in 2Calculate.	using 2Animate. Children will learn what the Onion Skin tool does in animation and use the Onion Skin tool to create an animated image. They will use backgrounds and sounds to make more complex and imaginative animations. Children will learn what 'stop motion' animation is and how it is created and use ideas from existing 'stop motion' films to recreate their own animation. Children will then share their animations and commented on each other's work using display boards and blogs in Purple Mash.	Children will explain what a variable is when used in programming and create a timer that prints a new number to the screen every second. They explain how they made their program change the number every second and create algorithms to show simple events. Children will learn how to manipulate graphics in the design view to achieve the desired look for the program and use an algorithm when making a simulation of an event on the computer.
Year 5	*Safe and responsible use* *Purple Mash unit: Online Safety* In this unit of work, children will think critically about what they share online, even when asked by a usually reliable person to share something. Children will gather research and share clear ideas about good passwords. Children will see how they can use images and digital technology to create effects not possible without technology. They will explore how image manipulation could be used to upset them or others even using simple, freely available tools and little specialist knowledge.	*Digital Society* *Purple Mash unit: Concept maps* Children will explore how social media impacts on daily life. They will learn how to stay safe online when using social media, learning how to create password protections. Children will have a key focus on cyber-bullying and the negative impacts this has on a person. They will think about how their online persona is reflected in a digital society. The children will think about different types of social media and the image they want to create for themselves on-line. They will look at how air-brushing and filtering can impact on a person's sense of self.	*3D Designs* *Stand Alone Unit* In this unit, children will use the 3D printer to create designs based on characters from books. The children will use caddy software to design and create their fictional character. The children will learn how to structure their models onto the caddy design. The children will assess and edit their designs. They will use repeating patterns to create multiple 3D designs and explore how to re-size and re-model their designs. Children will evaluate their products and share next steps with a partner.	*Handling Data* *Purple Mash unit: Databases and Spreadsheets* The children will learn how to create a formula in a spreadsheet to convert m to cm. They will explore how to apply this to creating a spreadsheet that converts miles to km and vice versa. Children will use a spreadsheet to work out which letters appear most often. They will learn how to use the 'how many' tool. Children will create simple formulae that use different variables. They will also create a formula that will work out how many days there are in x number of weeks or years.	*Multimedia* *Purple Mash unit: Game creator* Children will learn what the 2Design and Make tool is for. They will explore the different viewpoints in 2Design and Make whilst designing a building. Then, they will adapt one of the vehicle models by moving the points to alter the shape of the vehicle while still maintaining its form. Children will explore how to edit the polygon 3D models to design a 3D model for a purpose. After this, they will refine one of their designs to prepare it for printing. Children will print their design as a 2D net and then created a 3D model. Finally, using the 3D printer, children will incorporate prior learning to add designs to tinkercad and print in 3D form.	*Coding* *Purple Mash unit: Coding* Children will use sketching to design a program and reflect upon their design and create code that conforms to their design. They will explain how their program simulates a physical system and select the relevant features of a situation to incorporate into their simulation by using decomposition and abstraction. Children will reflect upon the effectiveness of their simulation. Children can explain what a variable is in programming and set/change the variable values appropriately. Children will learn some ways that text variables can be used in coding. Children can create a game which has a timer and score pad and use variables to control the objects in the game. Children will create loops

						using the timer and If/else statements.
Year 6	_Safe and responsible use_ _Purple Mash unit: Online safety_ Children will identify the benefits and risks of mobile devices broadcasting the location of the user/device, e.g. apps accessing location. Also, they will identify secure sites by looking for privacy seals of approval, e.g. https, padlock icon. They will explore and identify the benefits and risks of giving personal information and device access to different software. Children will review the meaning of a digital footprint and understand how and why people use their information and online presence to create a virtual image of them as a user. To finish, children will have a clear idea of appropriate online behaviour and how this can protect themselves and others from possible online dangers, bullying and inappropriate behaviour. They will begin to understand how information online can persist and give away details of those who share or modify it.	_Digital Society_ _Purple Mash unit: Networks_ In this unit of work, children will review social media and how to stay safe online when accessing social media websites. Children will plan and design a safety booklet for other children, using age-related social media outposts to support them. The children will learn how social media can impact on lives in the future and how to ensure that their digital self is protected from online dangers such as trolling and cyber-bullying. Children will learn all about how cookies can create a search history and how to maintain security when accessing social media online.	_Digital Literacy_ _Purple Mash unit: Blogging_ Children will create a blog with a specific purpose. They will understand that the way in which information is presented has an impact upon the audience and that blogs needed to be updated regularly to maintain the audience's interest and engagement. Children will post comments and blog posts to an existing class blog. They will develop an understanding that the approval process that their posts go through and demonstrate an awareness of the issues surrounding inappropriate posts and cyberbullying. Finally, children will use the school website to begin to post online blogs. Children will share their blogs with the rest of the class and children will share their ideas. Key focus- refer back to Digital Society and links to e-safety to ensure children are fully aware of the consequences when talking and sharing information online.	_Handling Data_ _Purple Mash unit: Spreadsheets_ Children will create a spreadsheet to answer a mathematical question relating to probability. They will learn how they can take copy and paste shortcuts. Children will problem solve using the count tool. Then, they will create a machine to help work out the price of different items in a sale. Children will use the formula wizard to create formulae. Children will then use a spreadsheet to solve a problem. Children can use a spreadsheet to model a real-life situation and come up with solutions. Finally, Children will make practical use of a spreadsheet to help plan actions.	_3D designs_ _Stand-alone unit_ In this unit, children will build on prior learning, using tinkercad software to design, create and evaluate their work. The children will create 3D models using Google3D to design and structure their models. The children will then use tinkercad to transfer their designs and using the 3D printer, create and evaluate their models. Children will look at how to create a solid base that will stand freely. Children will evaluate their designs and edit to ensure that the structure can stand.	_Coding_ _Purple Mash unit: Coding_ Children can plan a program before coding to anticipate the variables that will be required to achieve the desired effect. They will follow through plans to create the program and learn how to debug when things do not run as expected. Children will explain what functions are and how they can be created and labelled in 2Code. Also, they will explain how to move code from one tab to another in 2Code. Children will explain how they organised code in a program into functions to make it easier to read Children will code a series of programs that take text input from the user and use this in the program and will attribute variables to user input. They will become aware of the need to code for all possibilities when using user input. . Children will follow flowcharts to create and debug code and create flowcharts for algorithms using 2Chart. Children will be creative with the way they code to generate novel visual effects.