

# Computing Year 1/2 Medium Term plans and Objectives

## Autumn

### Unit 1.1 – Online Safety & Exploring Purple Mash

Lesson	Title	Aims (Objectives)	Success Criteria
1	Safe Logins	<ul style="list-style-type: none"> <li>To log in safely and understand why that is important.</li> <li>To create an avatar and to understand what this is and how it is used.</li> <li>To be able to create a picture and add their own name to it.</li> <li>To start to understand the idea of 'ownership' of creative work.</li> <li>To save work to the My Work area and understand that this is private space.</li> </ul>	<ul style="list-style-type: none"> <li>Children can log in to Purple Mash using their own login.</li> <li>Children have created their own avatar and understand why they are used.</li> <li>Children can add their name to a picture they created on the computer.</li> <li>Children are beginning to develop an understanding of ownership of work online.</li> <li>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.</li> </ul>
2	My Work Area	<ul style="list-style-type: none"> <li>To learn how to find saved work in the Online Work area.</li> <li>To learn about what the teacher has access to in Purple Mash.</li> <li>To learn how to see messages left by the teacher on their work.</li> <li>To learn how to search Purple Mash to find resources.</li> </ul>	<ul style="list-style-type: none"> <li>Children can find their saved work in the Online Work area of Purple Mash.</li> <li>Children can find messages that their teacher has left for them on Purple Mash.</li> <li>Children can search Purple Mash to find resources.</li> </ul>
3	Purple Mash Topics	<ul style="list-style-type: none"> <li>To become familiar with the types of resources available in the Topics section.</li> <li>To become more familiar with the icons used in the resources in the Topics section.</li> <li>To start to add pictures and text to work.</li> </ul>	<ul style="list-style-type: none"> <li>Children will be able to use the different types of topic templates in the Topics section confidently.</li> <li>Children will be confident with the functionality of the icons in the topic templates.</li> <li>Children will know how to use the different icons and writing cues to add pictures and text to their work.</li> </ul>
4	Purple Mash Tools	<ul style="list-style-type: none"> <li>To explore the Tools area of Purple Mash and to learn about the common icons used in Purple Mash for Save, Print, Open, New.</li> <li>To explore the Games area on Purple Mash.</li> <li>To understand the importance of logging out when they have finished.</li> </ul>	<ul style="list-style-type: none"> <li>Children have explored the Tools section on Purple Mash and become familiar with some of the key icons: Save, Print, Open and New.</li> <li>Children have explored the Games section and looked at Table Toons (2x tables).</li> <li>Children can log out of Purple Mash when they have finished using it and know why that is important.</li> </ul>

## Unit 2.5 – Effective Searching

Lesson	Title	Aims (Objectives)	Success Criteria
1	Understanding the Internet and Searching	<ul style="list-style-type: none"> <li>To understand the terminology associated with the Internet and searching.</li> </ul>	<ul style="list-style-type: none"> <li>Children can recall the meaning of key Internet and searching terms.</li> <li>Children have completed a quiz about the Internet.</li> </ul>
2	Searching the Internet	<ul style="list-style-type: none"> <li>To gain a better understanding of searching the Internet.</li> </ul>	<ul style="list-style-type: none"> <li>Children can identify the basic parts of a web search engine search page.</li> <li>Children have learnt to read a web search results page.</li> <li>Children can search the Internet for answers to a quiz.</li> </ul>
3	Sharing Knowledge of the Internet and Effective Searching	<ul style="list-style-type: none"> <li>To create a leaflet to help someone search for information on the Internet.</li> </ul>	<ul style="list-style-type: none"> <li>Children have created a leaflet to consolidate knowledge of effective Internet searching.</li> </ul>

## Unit 1.4 – Lego Builders

Lesson	Title	Aims (Objectives)	Success Criteria
1	Following Instructions	<ul style="list-style-type: none"> <li>To emphasise the importance of following instructions.</li> </ul>	<ul style="list-style-type: none"> <li>Children know that to achieve the effect they want when building something, they need to follow accurate instructions.</li> <li>Children know that by following the instructions correctly, they will get the correct result.</li> <li>Children know that an algorithm is a precise, step-by-step set of instructions used to solve a problem or achieve an objective.</li> </ul>
2	Following and Creating Simple Instructions on the Computer.	<ul style="list-style-type: none"> <li>To follow and create simple instructions on the computer.</li> </ul>	<ul style="list-style-type: none"> <li>Children can follow instructions in a computer program.</li> <li>Children can explain the effect of carrying out a task with no instructions.</li> <li>Children know that computers need precise instructions to follow.</li> <li>Children know that an algorithm written for a computer to follow is called a program.</li> </ul>
3	To consider how the order of instructions affects the result.	<ul style="list-style-type: none"> <li>To consider how the order of instructions affects the result.</li> </ul>	<ul style="list-style-type: none"> <li>Children understand how the order in which the steps of a recipe are presented affects the outcome.</li> <li>Children can organise instructions for a simple recipe.</li> <li>Children know that correcting errors in an algorithm or program is called 'debugging'.</li> </ul>

## Spring

### Unit 1.9 – Technology outside school

Lesson	Title	Aims (Objectives)	Success Criteria
1	What is Technology?	<ul style="list-style-type: none"><li>To find and understand examples of where technology is used in the local community</li></ul>	<ul style="list-style-type: none"><li>Children understand what is meant by 'technology'.</li><li>Children have considered types of technology used in school and out of school.</li></ul>
2	Technology outside school.	<ul style="list-style-type: none"><li>To record examples of technology outside school.</li></ul>	<ul style="list-style-type: none"><li>Children have recorded 4 examples of where technology is used away from school.</li></ul>

### Unit 1.2 – Grouping & Sorting

Lesson	Title	Aims (Objectives)	Success Criteria
1	Sorting Away from the Computer	<ul style="list-style-type: none"><li>To sort items using a range of criteria.</li></ul>	<ul style="list-style-type: none"><li>Children can sort various items offline using a variety of criteria.</li></ul>
2	Sorting on the Computer	<ul style="list-style-type: none"><li>To sort items on the computer using the 'Grouping' activities in Purple Mash.</li></ul>	<ul style="list-style-type: none"><li>Children have used Purple Mash activities to sort various items online using a variety of criteria.</li></ul>

### Unit 2.6 – Creating Pictures

Lesson	Title	Aims (Objectives)	Success Criteria
1	Introduction and Impressionism	<ul style="list-style-type: none"><li>To explore 2Paint A Picture.</li><li>To look at the work of Impressionist artists and recreate them using the Impressionism template.</li></ul>	<ul style="list-style-type: none"><li>Children can describe the main features of impressionist art.</li><li>Children can use 2Paint a Picture to create art based upon this style.</li></ul>
2	Pointillist Art	<ul style="list-style-type: none"><li>To look at the work of pointillist artists such as Seurat.</li><li>To recreate pointillist art using the Pointillism template.</li></ul>	<ul style="list-style-type: none"><li>Children can explain what pointillism is.</li><li>Children can use 2Paint a Picture to create art based upon this style.</li></ul>
3	Piet Mondrian	<ul style="list-style-type: none"><li>To look at the work of Piet Mondrian and recreate it using the Lines template.</li></ul>	<ul style="list-style-type: none"><li>Children can describe the main features of Piet Mondrian's work.</li><li>Children can use 2Paint a Picture to art based upon his style.</li></ul>

4	William Morris and Pattern	<ul style="list-style-type: none"> <li>To look at the work of William Morris and recreate it using the Patterns template.</li> </ul>	<ul style="list-style-type: none"> <li>Children can describe the main features of art that uses repeating patterns.</li> <li>Children can use 2Paint a Picture to create art by repeating patterns in a variety of ways.</li> <li>Children can combine more than one effect in 2Paint a Picture to enhance patterns.</li> </ul>
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## Summer

### Unit 1.8 – Spreadsheets

Lesson	Title		Success Criteria
1	Introduction to Spreadsheets	<ul style="list-style-type: none"> <li>To understand what a spreadsheet looks like.</li> <li>To be able to navigate around a spread sheet and enter data.</li> <li>To learn new vocabulary related to spreadsheets.</li> </ul>	<ul style="list-style-type: none"> <li>Children can navigate around a spreadsheet.</li> <li>Children can explain what rows and columns are.</li> <li>Children can save and open sheets.</li> <li>Children can enter data into cells.</li> </ul>
2	Adding Images to a Spreadsheet and Using the Image Toolbox	<ul style="list-style-type: none"> <li>To add clipart images to a spreadsheet.</li> <li>To use the 'move cell' and 'lock' tools.</li> </ul>	<ul style="list-style-type: none"> <li>Children can open the Image toolbox and find and add clipart.</li> <li>Children can use the 'move cell' tool so that images can be dragged around the spreadsheet.</li> <li>Children can use the 'lock' tool to prevent changes to cells.</li> </ul>
3	Using the 'Speak' and 'Count' Tools in 2Calculate to Count Items	<ul style="list-style-type: none"> <li>To use the 'speak' and 'count' tools in 2Calculate to count items.</li> </ul>	<ul style="list-style-type: none"> <li>Children can give images a value that the spreadsheet can use to count them.</li> <li>Children can add the count tool to count items.</li> <li>Children can add the speak tool so that the items are counted out loud.</li> <li>Children can use a spreadsheet to help work out a fair way to share items (Extension)</li> </ul>

# Unit 1.7 – Coding

Lesson	Title		Success Criteria
1	Instructions	<ul style="list-style-type: none"> <li>To understand what instructions are.</li> <li>To predict what will happen when instructions are followed.</li> <li>To understand that computer programs work by following instructions called code.</li> </ul>	<ul style="list-style-type: none"> <li>Children can give and follow instructions.</li> <li>Children can draw symbols to represent instructions.</li> <li>Children can arrange code blocks to create a set of instructions.</li> </ul>
2	Objects and Actions	<ul style="list-style-type: none"> <li>To use code to make a computer program.</li> <li>To understand what objects and actions are.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a program using code blocks.</li> <li>Children can use object and action code blocks.</li> </ul>
3	Events	<ul style="list-style-type: none"> <li>To understand what an event is.</li> <li>To use an event to control an object.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a simple program using code blocks.</li> <li>Children can use event, object and action code blocks.</li> </ul>
4	When Code Executes	<ul style="list-style-type: none"> <li>To understand what an event is.</li> <li>To begin to understand how code executes when a program is run.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a simple program using code blocks.</li> <li>Children can use event, object and action code blocks.</li> <li>Children can notice when their code executes when their program is run.</li> </ul>
5	Setting the Scene	<ul style="list-style-type: none"> <li>To understand what backgrounds and objects are.</li> <li>To understand how to use the scale property.</li> </ul>	<ul style="list-style-type: none"> <li>Children can edit a scene by adding, deleting and moving objects.</li> <li>Children can change the size of objects using the properties table.</li> </ul>
6	Using a Plan	<ul style="list-style-type: none"> <li>To plan a computer program.</li> <li>To make a computer program.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a design plan for their Free Code Scene program.</li> <li>Children can use code to make the program they have designed work.</li> </ul>

## Unit 2.1 – Coding

Lesson	Title	Aims (Objectives)	Success Criteria
1	Algorithms	<ul style="list-style-type: none"> <li>To understand what an algorithm is.</li> <li>To create a computer program using an algorithm.</li> </ul>	<ul style="list-style-type: none"> <li>Children can explain that an algorithm is a set of instructions.</li> <li>Children can describe the algorithms they created.</li> <li>Children can explain that for the computer to make something happen, it needs to follow clear instructions.</li> </ul>
2	Collision Detection	<ul style="list-style-type: none"> <li>To create a program using a given design.</li> <li>To understand the collision detection event.</li> </ul>	<ul style="list-style-type: none"> <li>Children can plan an algorithm that includes collision detection.</li> <li>Children can create a program using collision detection.</li> <li>Children read blocks of code and predict what will happen when it is run.</li> </ul>
3	Using a Timer	<ul style="list-style-type: none"> <li>To understand that algorithms follow a sequence.</li> <li>To design an algorithm that follows a timed sequence.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a program that uses a timer-after command.</li> <li>Children can explain what the timer-after command does in their program.</li> <li>Children can predict what will happen in a program that includes a timer-after command.</li> </ul>
4	Different Object Types	<ul style="list-style-type: none"> <li>To understand that different objects have different properties.</li> <li>To understand what different events do in code.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a computer program that includes different object types.</li> <li>Children can modify the properties of an object.</li> <li>Children can use different events in their program to make objects move.</li> </ul>
5	Buttons	<ul style="list-style-type: none"> <li>To create a program using a given design.</li> <li>To understand the function of buttons in a program.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a computer program that includes a button object.</li> <li>Children can explain what a button does in their program.</li> <li>Children can modify the properties of a button to fit their program design.</li> </ul>
6	'Smelly Code' Debugging	<ul style="list-style-type: none"> <li>To know what debugging means.</li> <li>To understand the need to test and debug a program repeatedly.</li> <li>To debug simple programs.</li> </ul>	<ul style="list-style-type: none"> <li>Children can explain what debug (debugging) means.</li> <li>Children can use a design document to start debugging a program.</li> <li>Children can debug simple programs.</li> </ul>

5	Surrealism and eCollage	<ul style="list-style-type: none"><li>• To look at some surrealist art and create your own using the eCollage function in 2Paint A Picture.</li></ul>	<ul style="list-style-type: none"><li>• Children can describe surrealist art.</li><li>• Children can use the eCollage function in 2Paint a Picture to create surrealist art using drawing and clipart.</li></ul>
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