

Computing Long Term Overview- Year 2

Autumn 1			
<p>Online Safety Year 2 Pack - Lesson 1 - Digital Footprints</p> <p>PM - Unit 2.1 Coding</p>	<p>The initial aim of this unit is to teach pupils about leaving digital footprints - how and why this happens. They will be introduced to block coding, which builds on from their Lego Maze unit in Year 1. They will recap on the meaning of an algorithm and explain how these are used in modern technology. The remainder of the unit works on developing their basic coding skills, creating longer strings of code and linking them together using function buttons. The children will also work on creating a programme that includes a collision and utilise the collision detection function. This element of the design will require extensive debugging as children realise that each of their algorithms may be slightly different and require different bug detection techniques.</p>		
	NC Objectives	Overview	Area of Computing
	<p><u>Online Safety - Digital Footprints</u></p> <ul style="list-style-type: none"> Recognise common uses of information technology beyond school. Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies looking at how much information we can find out about a person online 	<p><u>Pupils will:</u></p> <ul style="list-style-type: none"> Gain an understanding of how people leave a digital footprint (including the types of information recorded) Identify examples of digital footprints from given case studies Share the information that has been found and explain how and by who, it could be used. Begin to explain how the impact of digital footprints can be reduced 	<p><u>Predominant Area of Computing</u></p> <p>Digital Literacy (inc E-Safety)</p>
<p><u>Unit 2.1 Coding</u></p> <ul style="list-style-type: none"> Understand how algorithms are implemented as programs on digital devices Understand that programs execute by following precise and unambiguous instructions Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs Organise, sort and then store data 	<p><u>Pupils will:</u></p> <ul style="list-style-type: none"> Understand what an algorithm is. Create a computer program using an algorithm. Create a program using a given design Understand the collision detection event Recognise that algorithms follow a sequence. Design an algorithm that follows a timed sequence. Appreciate what different events do in code. Create a program using a given design. Understand the function of buttons in a program. Know what debugging means. Understand the need to test and debug a program repeatedly. Debug simple programs. 	<p><u>Predominant Area of Computing</u></p> <p>Computer Science</p>	

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Autumn 2			
<p>Online Safety Year 2 Pack - Lesson 2 - Keywords</p> <p>PM Unit 2.3 Spreadsheets</p> <p>PM Unit 2.2 Online Safety</p>	<p>The aim of this unit is to teach pupils about using software safely and effectively. They will be introduced to Purple Mash and taught how log in safely and understand why that is important. They will also learn how to find saved work in their Online Work area and become familiar with the types of resources available in the Topics section. Finally, children will be taught the importance of logging out when they have finished their work and how to protect their own log in details.</p>		
	NC Objectives	Overview	Area of Computing
	<p><u>Online Safety - Keywords</u></p> <ul style="list-style-type: none"> Recognise common uses of information technology beyond school. Use technology safely and respectfully in the context of finding relevant information about a destination using keywords. 	<p><u>Pupils will</u></p> <ul style="list-style-type: none"> Use a safe searching piece of software to find facts about holiday locations Utilise important keywords to refine and narrow their search criteria and results Explain what makes an effective search keyword (focused, specific, narrow) 	<p><u>Predominant Area of Computing</u></p> <p>Digital Literacy (inc E-Safety)</p>
	<p><u>Unit 2.3 Spreadsheets</u></p> <ul style="list-style-type: none"> Explain what rows and columns are in a spreadsheet Open, save and edit a spreadsheet Be able to include images from the image toolbox and allocate them a value Use the count tool to count items in a spreadsheet 	<p><u>Pupils will</u></p> <ul style="list-style-type: none"> Review the work done in 2Calculate in Yr 1. Use some tools that were introduced in Yr 1. Use copying, cutting and pasting shortcuts Use tallying tools. Solve a simple puzzle Explore the capabilities of a spreadsheet in adding up coins to match the prices of objects Add and edit data in a table layout. • To use the data to manually create a block graph 	<p><u>Predominant Area of Computing</u></p> <p>Information Technology</p>
	<p><u>Unit 2.2 Online Safety</u></p> <ul style="list-style-type: none"> Use technology safely and respectfully Keeping personal information private Identify where to go for help and support when they have concerns about material on the internet or other online technologies 	<p><u>Pupils will</u></p> <ul style="list-style-type: none"> To use digital technology to share work on Purple Mash to communicate and connect with others locally. Use Purple Mash Email as a communication tool using 2Respond simulations. To open and send simple online communications in the form of email. 	<p><u>Predominant Area of Computing</u></p> <p>Digital Literacy (inc E-Safety)</p>

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Spring 2		
The units this term continue to allow the children to build on key knowledge about how to stay safe online by being able to identify age appropriate websites using a safe browser. Next, they take their first look at using technology to recreate the works of several famous artists. The children will analyse the benefits and drawbacks of using software to create art and compare their recreations against the original pieces.		
NC Objectives	Overview	Area of Computing
<p>Online Safety Year 2 Pack - Lesson 4 - Rate and Review</p> <p>PM Unit 2.6 Creating Pictures</p>		
<p><u>Online Safety - Rate and Review</u></p> <ul style="list-style-type: none"> • Use technology purposefully to create data • Identify where to go for help and support when they have concerns about material on the internet or other online technologies • recognise common uses of information technology beyond school 	<p><u>Pupils will:</u></p> <ul style="list-style-type: none"> • Discuss age appropriate web and movie content and explain how they know it is suitable • Learn how to review and rate the content of a website • Conduct a review of several pre-approved websites 	<p><u>Predominant Area of Computing</u></p> <p>Digital Literacy (inc E-Safety)</p>
<p><u>PM Unit 1.6 & Animated Story Books</u></p> <ul style="list-style-type: none"> • Use technology purposefully to create data • Organise, sort and then store data • Manipulate and retrieve digital 	<p><u>Pupils will:</u></p> <ul style="list-style-type: none"> • Explore 2Paint A Picture. • Look at the work of Impressionist artists and recreate them using the Impressionism template • Look at the work of pointillist artists such as Seurat. • Recreate pointillist art using the Pointillism template • Look at the work of Piet Mondrian and recreate it using the Lines template. • Look at the work of William Morris and recreate it using the Patterns template. 	<p><u>Predominant Area of Computing</u></p> <p>Information Technology</p>

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Summer 1			
<p>Online Safety Year 1 Pack - Lesson 5 - Being Kind Online</p>	<p>During Summer 1, the first element of the curriculum is to gain a basic understanding of bullying online. Children will explore the differences -person and cyber bullying and identify solutions to situations that may arise. Children will then, recap on their prior unit all about safe searching and using keywords. They will combine all this knowledge to complete a series of tasks using safe searches and produce a leaflet helping others to stay safe when searching online. Finally, they will utilise their coding skills from earlier on in the year and transfer their skills into a new block coding programme. Over the course of 2 or 3 weeks, children will create a small collision detection programme.</p>		
<p>PM Unit 2.5 Effective Searching</p>	<p>NC Objectives</p>	<p>Overview</p>	
<p>Scratch Jr - 2 Week Coding Course</p>	<p>Area of Computing</p>		
<p>PM Unit 2.5 Effective Searching</p>	<p><u>Online Safety - Being Kind Online</u></p> <ul style="list-style-type: none"> Recognise common uses of information technology beyond school. Use technology safely and respectfully, keeping personal information private; Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies 	<p><u>Pupils will:</u></p> <ul style="list-style-type: none"> Identify some in-person and online kind/unkind behaviours Discuss if there are any differences between in-person or cyber bullying Discuss some cyberbullying scenario cards Work together to identify suitable solutions to dealing with cyber bullying 	<p><u>Predominant Area of Computing</u></p> <p>Digital Literacy (inc E-Safety)</p>
<p>Scratch Jr - 2 Week Coding Course</p>	<p><u>Unit 2.5 Effective Searching</u></p> <ul style="list-style-type: none"> Identify where to go for help and support when they have concerns about material on the internet or other online technologies Use technology purposefully to create data Organise, sort and then store data Manipulate and retrieve digital content 	<p><u>Pupils will:</u></p> <ul style="list-style-type: none"> Understand the terminology associated with the Internet and searching Gain a better understanding of searching the Internet. Create a leaflet to help someone search for information on the Internet. 	<p><u>Predominant Area of Computing</u></p> <p>Digital Literacy (inc E-Safety)</p>
<p>Scratch Jr - 2 Week Coding Course</p>	<p><u>Scratch Jr - 2 Week Coding Course</u></p> <ul style="list-style-type: none"> Understand how algorithms are implemented as programs on digital devices Understand that programs execute by following precise and unambiguous instructions Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs 	<p><u>Pupils will:</u></p> <ul style="list-style-type: none"> Use prior knowledge of block coding in Purple Mash to find comparable coding blocks in Scratch Jr Build simple algorithms into a small section of code which will incorporate their sprite movement skills, background changing, collision detection and debugging skills Test and improve their programme based on peer feedback 	<p><u>Predominant Area of Computing</u></p> <p>Computer Science</p>

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Summer 2			
<p>Online Safety Year 2 Pack - Lesson 6 - Cyber Snakes & Ladders</p> <p>PM Unit 2.7 Making Music</p> <p>PM Unit 2.8 Presenting Ideas</p>	<p>Over the course of the final term, a lot of the children's prior knowledge will be utilised across the topics. The first element of the curriculum is to gain a basic understanding of how to support others online and sharing their own expertise. Children will then, use Purple Mash music software to listen to and create their own music to suit a mood. Finally, the children will create an animated story book which combines coding, music, digital imagery and debugging in order to finish their final piece of work.</p>		
	NC Objectives	Overview	Area of Computing
	<p><u>Online Safety - Cyber Snakes & Ladders</u></p> <ul style="list-style-type: none"> Use technology safely and respectfully, keeping personal information private; Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies Answering questions about online safety 	<p><u>Pupils will;</u></p> <ul style="list-style-type: none"> Choose a sensible course of action if I feel uncomfortable online. Explain how to safely search for information online. Choose appropriate websites for someone my age. 	<p><u>Predominant Area of Computing</u></p> <p>Digital Literacy (inc E-Safety)</p>
	<p><u>Unit 2.7 Making Music</u></p> <ul style="list-style-type: none"> Use technology purposefully to create data Organise, sort and then store data Manipulate and retrieve digital content Identify where to go for help and support when they have concerns about material on the internet or other online technologies and digital content 	<p><u>Pupils will;</u></p> <ul style="list-style-type: none"> Be introduced to making music digitally using 2Sequence. Explore, edit and combine sounds Add sounds to a tune to improve it Think about how music can be used to express feelings and create tunes which depict feelings. Create their own tune using the sounds which they have saved 	<p><u>Predominant Area of Computing</u></p> <p>Information Technology</p>
<p><u>Unit 2.8 Presenting Ideas</u></p> <ul style="list-style-type: none"> Identify where to go for help and support when they have concerns Use technology purposefully to create data Organise, sort and then store data Manipulate and retrieve digital content Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs 	<p><u>Pupils will;</u></p> <ul style="list-style-type: none"> Explore how a story can be presented in different ways. Make a quiz about a story or class topic. Make a fact file on a non-fiction topic. Make a presentation to the class 	<p><u>Predominant Area of Computing</u></p> <p>Information Technology</p>	



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