


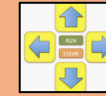


2021-22 Computing Long Term Map

Year 1

	Theme	National Curriculum Objectives
Autumn 1	<p style="text-align: center;"><u>Paddington's Adventures</u></p> <p>Digital Literacy</p> <p><u>Introduction to computing</u></p> <p>Children need to be accessing the ICT suite once a week to familiarise themselves with the computers and how to use them. Basic skills are the key to learning in this unit.</p> <p>Familiarise with double clicking, logging on/off, find and open their own folder on Group Shared, learn how to open Word and save a document in their own folder.</p> <p>Introduce them to Purple Mash and share their logins.</p> <p>Can they remember them?</p> <p>By the end of the half term, children need to be logging on independently and be able to find Purple Mash and log on using their personal logon.</p> <p>Use 2Paint to create a picture of Paddington and save it in their My Work section of Purple Mash.</p> <p><u>Evidence</u>- Paddington pictures saved in children's Work folder in Purple Mash. Could also share these to the noticeboard in PM. Photos of children using PCs uploaded to the computing folder in Seesaw.</p>	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>
Autumn 2	<p style="text-align: center;"><u>Childhood Then and Now</u></p> <p>Digital Literacy Online safety</p> <p>Purple Mash Unit 1.1</p> <p>To log in safely. To start to understand the idea of 'ownership' of their creative work. To learn how to find saved work in the Online Work area and find teacher comments. To learn how to search Purple Mash to find resources. To become familiar with the types of resources available in the Topics section. To become more familiar with the icons used in the resources in the Topics section. To start to add pictures and text to work. To explore the Tools section of Purple Mash and to learn about the common icons used in Purple Mash for Save, Print, Open, New. To explore the Games section on Purple Mash. To understand the importance of logging out when they have finished.</p> <p><u>Evidence</u>- work saved in the My Work section of Purple Mash in their own folder</p>	<div style="text-align: right;">  </div> <p>Recognise common uses of information technology beyond school</p> <p>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>

It's Good to be me



Computer Science

Programming- Mazes

Purple Mash Unit 1.5

Use Code a Pillars to introduce algorithms before starting Purple Mash lessons. Create mazes around the classroom with masking tape for the children to program the Code a Pillars. See if they can make them travel around the mazes successfully.

To understand the functionality of the basic direction keys. To be able to use the direction keys to complete challenges successfully. To understand how to create and debug a set of instructions (algorithm).

To use the additional direction keys as part of their algorithm. To understand how to change and extend the algorithm list. To create a longer algorithm for an activity.

Evidence- Photos of Code a Pillar activity in the computing folder on Seesaw. Children explaining what they have done either verbally or written as a comment on Seesaw.

Purple Mash work saved in My Work folder.

Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions

Create and debug simple programs

Use logical reasoning to predict the behaviour of simple programs

Spring 1

Sensational Safari



Computer Science

Coding

Begin using Daisy the Dinosaur on iPads to introduce block code. Use 1 lesson for children to tinker with the program and to get used to the look of block code. (screenshot their work for Seesaw)

Purple Mash Unit 1.7 (Only lessons 1-4)

To create unambiguous instructions like those required by a computer. To build one- and two-step instructions using the printable code cards. To introduce 2Code. Use the 2Code program to create a simple program.

Use Design Mode to add and change backgrounds and characters. They will use the Properties table to change the look of the objects. Use the Properties table to change the look of the objects.

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

Evidence- work saved in My Work area of Purple Mash. Screen shots of Daisy the Dinosaur on Seesaw in Computing folder. Publish good examples to the Y1 noticeboard in Purple Mash.

Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions

Create and debug simple programs

Use logical reasoning to predict the behaviour of simple programs

Spring 2

Sensational Safari / Influential Individuals



Recognise common uses of information technology beyond school

Use technology purposefully to create, organise, store, manipulate and retrieve digital content

Summer 1

Digital Literacy-

Technology outside school

Microsoft Word

Purple Mash Unit 1.9 (the unit is down at 2 lessons but including Microsoft Word will extend to the whole half term. Some lessons may not need the suite- when you are on a technology hunt)

To find examples of technology in the classroom and around the school. Use the camera on the iPad to record examples of technology. Use the drawing tool on Seesaw to collate the pictures. To find technology at home (home learning task)

To look around the local community and find examples of where technology is used.

To record examples of technology, outside school. To begin to use Microsoft Word to document their findings (teach opening, editing and saving documents)

Evidence- Seesaw drawing including examples of technology found.

Word documents saved in children's own folders

Good examples of work photographed and saved in Computing folder on Seesaw.

Walk around the immediate local area to look for examples of technology (traffic lights, shop signs, electronic road signs, speed cameras)

Influential Individuals



Use technology purposefully to create, organise, store, manipulate and retrieve digital content

Summer 2

Information Technology

Animated stories

Purple Mash Unit 1.6

To introduce e-books and 2Create a Story.

To continue a previously saved story. To add animation to a story.

To add sound to a story, including voice recording and music the children have created.

To work on a more complex story, including adding backgrounds and copying and pasting pages.




To use additional features to enhance their stories. To share their e-books on a class display board.

Evidence- Work saved in their My Work section of Purple Mash. Publish examples to the Y1 noticeboard on Purple Mash

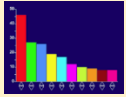
Year 2

	Theme	National Curriculum Objectives
Autumn 1	<p style="text-align: center;"><u>Where we live</u></p> <p>Digital Literacy Online Safety - inc. recap on basic skills</p> <p>Purple Mash unit 2.2- 3 lessons but will need all half term with basic skills recap and Word skills</p> <p>Begin with recapping basics, find their folder, open, save, edit on Word and Purple Mash.</p> <p>To know how to refine searches using the Search tool. To know how to share work electronically using the display boards. To use digital technology to share work on Purple Mash to communicate and connect with others locally.</p> <p>To have some knowledge and understanding about sharing more globally on the Internet. To introduce Email as a communication tool using 2Respond simulations. To understand how we talk to others when they aren't there in front of us. 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 begin to think critically about the information they leave online. To identify the steps that can be taken to keep personal data and hardware secure.</p> <p>Evidence-Word document saved in their own folder on Group shared</p> <p>Work in My Work area of Purple Mash</p> <p>Information Technology</p> <p>Making Music- 3 lessons</p> <p>Children are introduced to making music digitally using 2Sequence. They will explore, edit and combine sounds using 2Sequence and add sounds to a tune they've already created to change it. Children will think about how music can be used to express feelings and create tunes which depict feelings. They will upload a sound from a bank of sounds into the sounds section. They will record their own sound and upload it into the sounds section. They will create their own tune using the sounds which they have added to the Sounds section.</p> <p>Evidence- Work in My Work area of Purple Mash</p>	<p>Recognise common uses of information technology beyond school</p> <p>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> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p>
Autumn 2	<p style="text-align: center;"><u>A walk in the park</u></p> <p>Computer Science</p> <p>Algorithms</p> <p>Human Crane- Give each other precise instructions to complete an action</p> <p>Barefoot CAS- Crazy Characters</p>	<p>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p>



	<p><u>Code a Pillars</u>-Look at the Code a Pillars' bodies and how they link together by usb. Tinkering time to play with them and work out how to make them move. (Recap maze unit from Y1) Children in groups to make a code with their code a pillar and then create a maze around it with objects or tape. They then take the code a pillar apart and swap groups. The next group try and put the Code a Pillar back together so that it will go around the maze. At the end, you could make a giant Code a Pillar using all of the blocks. Ask the children to predict which way it will go during its travel.</p> <p><u>BeeBots</u>- Follow BeeBot Basics lesson (BarefootCas lesson)</p> <p><u>Evidence</u>- Photos of Beebot/Code a Pillar activities on Seesaw. Children explaining as a written or verbal comment.</p> 	<p>Use logical reasoning to predict the behaviour of simple programs</p>
<p>Spring 1</p>	<p style="text-align: center;"><u>Circle of Life</u></p> <p>Computer Science</p> <p><u>Coding</u></p> <p>Purple Mash Unit 2.1</p> <p>Recap work done last half term. Make sure that children can verbally explain what an algorithm is. To design algorithms and then code them and compare different object types. To use the repeat command. To use the timer command. To know what debugging is and debug programs.</p> <p>At the end of the unit, include a self-assessment using ready-made <u>Word</u> document. Children to save as their own name in their own folder on Group Shared drive.</p> <p><u>Evidence</u>- Purple Mash work saved in My Work area. <u>Word</u> self-assessment saved in Group Shared in their own named folder</p> 	<p>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs</p>
<p>Spring 2</p>	<p style="text-align: center;"><u>Sensational Shibden</u></p> <p>Digital Literacy-</p> <p><u>Touch typing 3 weeks</u></p> <p>Use 2Type to begin to show the children how they should place their fingers on the keyboard. Laminated keyboards to have in class to begin with. Colours relate to the fingers that they should use for those keys. Follow 2 Type and work through First Steps- set as 2Dos as needed. From now onwards, use laminated keyboards as starters in other computing lessons. Ask quick fire questions to get them to find the keys quickly. Practise putting their fingers on the correct keys etc.</p> <p>COMPUTING SUITE Digital Literacy-</p> <p><u>Effective Searching</u> Purple Mash unit 2.5 3 weeks</p> <p>To understand the terminology associated with searching. To gain a better understanding of searching on the Internet. To create a leaflet to help someone search for information on the Internet.</p> 	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school</p> <p>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>

	<p>Lesson 2- adapt to topic (not dinosaurs!)</p> <p>Show Kiddle as example of a child friendly search engine.</p> <p><u>Evidence</u>- Photographs of children practising their typing. Photos of them playing quick games using the laminated keyboards on Seesaw in the Computing folder.</p> <p>Purple Mash work saved in the My work section on PM</p> <p>Self-assessment on <u>Microsoft Word</u> (include skills from skills doc)</p>	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Summer 1</p>	<p style="text-align: center;"><u>Fire Fire!</u></p> <p><u>Computer Science</u></p> <p><u>Scratch jr- iPads unit</u> (Y1 Twinkl unit to be adapted if needed)</p> <p>Use cards first to show what the block-based code looks like. Show each block and explain what they mean. Be able to open the Scratch Jr app and start a new project. Add new characters and backgrounds. Use blocks for movement in different directions. Create short sets of sequenced instructions use different end blocks, including repeat forever. Change the size of characters to grow or shrink. Hide and show characters with an instruction block. Program two or more characters with instructions at the same time.</p> <p>Extend- more able coders will be able to use a repeat block for a section of instructions and specified number of time. Predict the behaviour of a character, based on a sequence of instructions, edit the colours and other features of characters or sprites and create longer sequences of more complex instructions.</p> <p><u>Evidence</u>- Screen shots of Scratch Jr projects on Seesaw. Children to explain what they have using comment or voice comments.</p>	<p>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Summer 2</p>	<p style="text-align: center;"><u>Sun, sea and sand</u></p> <p><u>Computer Science</u></p> <p>(1 short lesson) Jam sandwich algorithm activity to tie in with Giant Jam Sandwich. Teacher to act as a robot that makes jam sandwiches. Children each write instructions on how to make a jam sandwich. Take it in turns to instruct the 'robot' to make the sandwich- the robot must follow the instructions exactly to the letter! Hopefully, children will see the flaws in their instructions. Children then go back and debug their instructions and try again.</p> <p>Repeat activity with the newly debugged instructions.</p> <p>http://code-it.co.uk/unplugged/jamsandwich</p> <p><u>Digital Literacy</u> <u>Information Technology</u></p> <p><u>2Count</u></p> <p>Use 2Count in maths to support statistics. Take a tally of car colours or types of transport that travel down Pellon Lane over a 10 minute period. Use 2count to create a pictogram. Each class/group may get different results depending on when they go out. Look at pictograms and create questions for children to answer about them.</p>	<p>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>


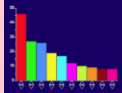


<p>Maths objectives- Interpret and construct simple pictograms, tally charts, block diagrams and tables. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparing categorical data.</p> <p>Evidence- Pictures of original and debugged instructions saved in Computing folder on Seesaw. Children explain what they did to debug their instructions and why they needed to improve them. Pictograms and questions/answers in maths books.</p>	
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Year 3

	Theme	National Curriculum Objectives
Autumn 1	<p style="text-align: center;"><u>The UK</u></p> <p>Digital Literacy- Online Safety</p> <p>Purple Mash unit 3.2 (3 lessons)</p> <p>Children learn what makes a safe password and how to keep their password and personal information safe. They learn how the Internet can be used in effective communication and understand how a blog can be used to communicate with a wider audience. Children will be able to consider the truth of the content of websites. They will also learn about the meaning of age restrictions symbols on digital media and devices.</p> <p>Evidence- work saved in their folders on Purple Mash</p> <p>Digital Literacy-</p> <p>Touch typing Purple Mash unit 3.4 (4 lessons- Don't teach lesson 1- they have done in Y2-reduce to 3 lessons)</p> <p><u>3 weeks</u></p> <p>Continue with the touch typing that children should be familiar with from Y2. Recap using the correct fingers for the right keys. Recap how they should place their fingers on the keyboard. Go back to laminated keyboards if needed. 2Type and work through 'Moving On' section- set as 2Dos as needed.</p> <p>From now onwards, use laminated keyboards as starters in some computing lessons. Ask quick fire questions to get them to find the keys quickly. Practise putting their fingers on the correct keys etc.</p> <p>Evidence Self-assessment on Microsoft Word (include skills from skills doc)</p>	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p>



Autumn 2	<p style="text-align: center;"><u>Romans</u></p> <p>Computer Science</p> <p><u>Coding</u> Purple Mash Y3 Coding 3.1</p> <p>Children will be able to explain that coding is how computer programs are created. They will be able to navigate around the 2Code interface, dragging and dropping code blocks and running code. They will be able to read flowcharts. They will be able to use timers in 2Code to create differing effects and use repetition commands. Lessons to introduce If statements to allow selection in a program. Children will be able to explain what steps to follow to debug a program.</p> <p>Children will explain why their computer program did not work. They will also be able to explain how they debugged a partner's program. Children will know and explain what a variable is in programming. Children will explain why variables need to be named and will be able to create a variable in a program. Children will set/change the variable values appropriately to create a timer.</p> <p><u>Evidence</u>- work saved in their folders on Purple Mash</p> <p>Self-assessment on <u>Microsoft Word</u> (include skills from skills doc)</p>	 <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>
Spring 1	<p style="text-align: center;"><u>Dinosaurs</u></p> <p>Information Technology</p> <p><u>Branching Databases</u> Purple Mash Unit 3.6</p> <p>Try and link databases to dinosaurs- use them to sort dinosaurs into the different categories</p> <p>To sort objects using just 'yes' or 'no' questions.</p> <p>To complete a branching database using 2Question.</p> <p>To create a branching database of the children's choice- including dinosaurs if possible</p> <p>Children know how to use and debug their own branching database.</p> <p><u>Evidence</u>- Purple Mash work saved in their folders.</p> <p>Photos on Seesaw and saved in Computing folder on Seesaw if needed</p>	 <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p>

Spring 2	<p style="text-align: center;"><u>American Adventures</u></p> <p>Digital Literacy Information Technology</p> <p>Email Purple Mash Unit 3.5</p> <p>To think about different methods of communication. To open and respond to an email. To write an email to someone using an address book To learn how to use email safely. To add an attachment to an email. To explore a simulated email scenario Link to Flat Stanley if possible- email in role to/from Flat Stanley</p> <p>Include one piece of Office software in this unit- either Microsoft Word/Powerpoint. Could use Word to word process a letter to Flat Stanley?</p> <p>Evidence- Purple Mash work saved in their folders. Self-assessment on Microsoft Word (include skills from skills doc)</p>	 <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>
Summer 1	<p style="text-align: center;"><u>Inlanders and Settlers</u></p> <p>Computer Science</p> <p>Programming- Scratch 3- unit could run over to next half term depending on how quickly they grasp Scratch This unit leads on from the 'Giant Jam Sandwich' lesson that children have done in Y2. Look at the planning for lesson 1 and recap on that lesson but don't reteach it. The unit focusses on the introduction of the Scratch 3 program and the block code used within it. Children have used Scratch Jr in Y2 so will be familiar with the interface. They have also completed a programming unit in Purple Mash so will be familiar with the block code and some of the commands.</p> <p>Understand and use repetition within algorithms and programs Use a range of inputs and selection within a program Plan a program in Scratch using inputs, repetition and selection Create a program using repetition, selection and inputs Debug your Scratch program</p> <p>Evidence Self-assessment on Microsoft Word (include skills from skills doc) Scratch programs saved in the children's folders</p>	 <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>


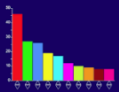

Summer 2	<p style="text-align: center;"><u>Invasors and Settlers</u></p> <p>Continuation of Scratch 3 unit if needed</p> <p>Use Microsoft Powerpoint to enhance topic/ science lessons. Include discrete teaching of skills from skills doc if any have been missed</p> <p>Evidence Self-assessment on Microsoft Word (include skills from skills doc)</p> <p>Scratch programs saved in the children's folders</p> <p>Computer Science</p> <p>Digital Literacy</p> <p>Networks</p> <p>To develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs. They will also compare digital and non-digital devices. To be introduced to computer networks, including devices that make up a network's infrastructure, such as wireless access points and switches. To discover the benefits of connecting devices in a network.</p> <p>Evidence - saved on Seesaw or in their folder on Group Shared</p> <p>Mop up any missed objectives and skills from skills progression document or Target Tracker statements</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>
	 	

Year 4

	Theme	National Curriculum Objectives
Autumn 1	<p style="text-align: center;"><u>Brazil</u></p> <p>Digital Literacy - Online Safety</p> <p>Purple Mash unit 4.2 (4 lessons)</p> <p>To understand how children can protect themselves from online identity theft. Children will understand that information put online leaves a digital footprint or trail and that this can aid identity theft. They will be able to identify the risks and benefits of installing software including apps. Children will understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism. Children will know how to use appropriate behaviour when participating or contributing to collaborative online projects for learning. To identify the positive and negative influences of technology on health and the environment and to understand the importance of balancing game and screen time with other parts of their lives. This is particularly important following on from potentially long periods of screen time at home during Covid-19 lockdown</p>	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>

	<p>2 lessons- <u>if time allows</u></p> <p>Create a 'how to' guide for helping people to spot fraudulent emails/text messages. Let children choose which software they want to use- Adobe Spark Page, Adobe Spark Video, Seesaw. Lots of real life examples of fraudulent emails and messages for children to use to help build their help sheet.</p> <p><u>Evidence- Purple Mash</u> work saved in their own folder,</p> <p>How to guide saved on Seesaw. Self-assessment on Seesaw</p>	<p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p>
Autumn 2	<p style="text-align: center;"><u>Ancient Egypt</u></p> <p><u>Digital Literacy-</u></p> <p><u>Purple Mash</u> unit 4.7 <u>Effective Searching- 3 lessons</u></p> <p>Recap on learning from <u>effective searching</u> unit in Year 2- what can they remember?</p> <p>From completing this unit, children will be able to structure search queries to locate specific information, to use search effectively to find out information and to assess whether an information source is true and reliable.</p> <p>Remainder of the lessons for this half term to be spent using these newly acquired search skills to help them create a PowerPoint around an aspect of Ancient Egypt. Children to focus on the skills in the basic skills section of the skills document in these lessons. Explicit teaching may be required for some of these skills.</p> <p><u>Evidence- Purple Mash</u> work saved in their folder</p> <p><u>PowerPoint</u> saved in their own folder in Group shared- also a peer assessment of another child's work to be saved</p>	<p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>
Spring 1	<p style="text-align: center;"><u>Stone Age</u></p> <p><u>Information Technology</u></p> <p><u>Animation</u></p> <p><u>Purple Mash</u> unit 4.6 followed by stop motion work on iPads</p> <p>Discuss what makes a good animated film or cartoon and what their favourites are. Children will learn how animations are created by hand and will find out how 2Animate can be created in a similar way using the computer. They will learn about onion skinning in animation and will add backgrounds and sounds to animations. They will be introduced to 'stop motion' animation and will share animation on the class display board and by blogging.</p> <p>Use iPads to create a 'stop motion' animation based on the stone age .</p> <p><u>Evidence- Purple Mash</u> work saved in their folder</p> <p>Stop motion videos shared to their Seesaw account and tagged in the computing folder</p> <p style="text-align: center;">Self assessment on Seesaw</p>	<p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p>



Spring 2	<p style="text-align: center;"><u>Antarctic Adventure</u></p> <p>Computer Science Digital Literacy Networks- Y4</p> <p>To apply their knowledge and understanding of networks, to appreciate the internet as a network of networks which need to be kept secure. They will learn that the World Wide Web is part of the internet, and will be given opportunities to explore the World Wide Web for themselves in order to learn about who owns content and what they can access, add, and create. Finally, they will evaluate online content to decide how honest, accurate, or reliable it is, and understand the consequences of false information</p> <p>Evidence- saved on Seesaw. Self-assessment on Word saved in their own folder on Group Shared</p>	 <p>Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p>
Summer 1	<p style="text-align: center;"><u>Bronze and Iron Age</u></p> <p>Information Technology Spreadsheets</p> <p>Purple Mash unit 4.3 Begin on Purple Mash and move to Excel</p> <p>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. Children will be able to use the timer, random number and spin button tools. Children will combine tools to make fun ways to explore number. They will use a series of data in a spreadsheet to create a line graph. Children 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. They will allocate values to images and use these to explore place value. Children will use a spreadsheet made in 2Calculate to check their understanding of a mathematical concept.</p> <p>Evidence- Purple Mash work saved in their folder. Any Excel work saved in their own folder in Group Shared</p>	 <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p>
Summer 2	<p style="text-align: center;"><u>Yorkshire</u></p> <p>Computer Science Scratch 3- Slug Trail and Crab Game</p> <p>The <u>Slug Trail</u> game helps build the skills that are needed for the <u>Crab</u> game. It has some simple actions combined with actions inside forever loops and one if condition within a loop. The slug follows the mouse whilst leaving a slimy trail. If it goes out of the road it sets off an alarm.</p>	 <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p>

<p>Children will steer a crab around a maze using keys on the keyboard. If the crab touches the walls of the maze it is electrocuted and the game ends. Crab maze can be extended to include multiple levels. They can also add scoring coins using a variable to hold the score. It includes forever loops, conditional if loops, broadcast commands and Cartesian coordinates.</p> <p>Evidence Scratch programs saved in the children's folders</p> <p>Self-assessment on Microsoft Word (include skills from skills doc)</p>	<p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>
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Year 5

	Theme	National Curriculum Objectives
Autumn 1	<p style="text-align: center;"><u>Early Islamic civilisations</u></p> <p>Digital Literacy Online Safety</p> <p><u>Purple Mash unit 5.2 4 Lessons</u></p> <p>To gain a greater understanding of the impact that sharing digital content can have. To review sources of support when using technology. To review children's responsibility to one another in their online behaviour and know how to maintain secure passwords. To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this. To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online. To learn about how to reference sources in their work. Children will be able to search the internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information. Ensuring reliability through using different methods of communication</p> <p><u>Evidence</u> Purple Mash work saved in their folder</p> <p>Information Technology Digital Literacy</p> <p>In the remaining weeks explore apps on the iPad to enhance topic lessons e.g. use Thinglink</p>	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p>

Autumn 2	<p style="text-align: center;"><u>Water world</u></p> <p>Computer Science</p> <p>Programming</p> <p>Scratch 3- Simulate physical systems</p> <p>Pupils work through the construction of a simulation of a sound and lighting system for a party. They will create sprites, include forever loops, use and change costumes, create a volume slider, use variables as a condition for selection and use if, then, else blocks. They then apply their knowledge to the simulation of a second physical system. At this stage pupils may choose one of the two suggested systems: traffic lights; pedestrian crossing, or think of their own system to simulate.</p> <p>Evidence Scratch programs saved in the children's folders</p> <p>Self-assessment on Microsoft Word (include skills from skills doc)</p>	 <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>
Spring 1	<p style="text-align: center;"><u>Space</u></p> <p>Information Technology</p> <p>Animation - Powerpoint animation of the phases of the moon</p> <p>Children will learn about the phases of the moon and why we see it differently at different point in the month. When they have an understanding of the phases, they will create a PowerPoint to show the moon's phases. They will need to think about transitions between slides and how to make it look like the phases are changing. They will add labels to each phase.</p> <p>Evidence Moon animations saved in the children's folders</p> <p>Self-assessment on Microsoft Word (include skills from skills doc)</p>	 <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p>
Spring 2	<p style="text-align: center;"><u>Ancient Greece</u></p> <p>Information Technology</p> <p>Concept maps</p> <p>Purple Mash unit 5.7</p> <p>Children will understand the need for visual representation when generating and discussing complex ideas. They will understand and use the correct vocabulary when creating a concept map. They will create their own concept map. They will understand how a concept map can be used to retell stories and information and will create a collaborative concept map and present this to an audience.</p> <p>Children can create a concept map about Ancient Greece. They can transfer their skills from Purple Mash to using Popplet</p> <p>Evidence Purple Mash work saved in their folder. Popplets saved on Seesaw</p>	 <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p>

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Summer 1</p>	<p style="text-align: center;"><u>Biomes</u></p> <p><u>Information Technology</u> <u>Spreadsheets - Twinkl unit</u></p> <p>Children are given an understanding of spreadsheets and how they can be used. In the first five lessons, a different spreadsheet template is provided in which children learn skills in formatting and entering specific formulas. Lessons 4 and 5 include investigative skills in using the spreadsheet to solve specific problems. Examples include number calculations, sports league tables, test scores, and budget planning. The final lesson allows an open-ended task for pupils to design their own spreadsheet, with ideas and direction provided for particular purposes. This final lesson can also be used for some pupils to return to or complete any previous spreadsheet tasks which may not have been finished.</p> <p><u>Evidence</u> - Saved in their folder on Group Shared</p> <p>Self-assessment on <u>Microsoft Word</u> (include skills from skills doc)</p>	 <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Summer 2</p>	<p style="text-align: center;"><u>London</u></p> <p><u>Computer Science</u> <u>Digital Literacy</u> <u>Networks- Y5</u></p> <p>Children will learn about the World Wide Web as a communication tool. First, they will learn how we find information on the World Wide Web, through learning how search engines work (including how they select and rank results) and what influences searching, and through comparing different search engines. They will then investigate different methods of communication, before focusing on internet-based communication. Finally, they will evaluate which methods of internet communication to use for particular purposes.</p> <p>When they have completed these, children to create a 'web page' about London using Adobe Spark Page.</p> <p><u>Evidence</u> - Saved in their folder on Group Shared</p> <p>Self-assessment on <u>Microsoft Word</u> (include skills from skills doc)</p> <p>Adobe Spark page saved to Seesaw account in the Computing folder and geography folder</p>	 <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</p>

Year 6

	Theme	National Curriculum Objectives
Autumn 1	<p style="text-align: center;"><u>World War 2</u></p> <p>Digital Literacy Online Safety</p> <p>Purple Mash unit 6.2 3 lessons</p> <p>Children will be able to identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g. apps accessing location. They will be able to identify secure sites by looking for privacy seals of approval, e.g. https, padlock icon. Identify the benefits and risks of giving personal information and device access to different software. Children understand how what they share impacts upon themselves and upon others in the long-term. Children know about the consequences of promoting inappropriate content online and how to put a stop to such behaviour when they experience it or witness it as a bystander. Children can take more informed ownership of the way that they choose to use their free time. They recognise a need to find a balance between being active and digital activities. · Children can give reasons for limiting screen time. · Children can talk about the positives and negative aspects of technology and balance these opposing views.</p> <p><u>Use remaining lessons this half term to focus on basic skills, searching skills and Office skills. Combine to create a PowerPoint or Word document about an aspect of WW2</u></p> <p>Evidence- Purple Mash Saved in their folder on Group Shared</p> <p>Self-assessment on Microsoft Word (include skills from skills doc)</p>	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>
Autumn 2	<p style="text-align: center;"><u>Crime and Punishment</u></p> <p>Information Technology</p> <p>Blogging Purple Mash unit 6.4</p> <p>Children understand how a blog can be used as an informative text. Children understand the key features of a blog. Children can work collaboratively to plan a blog and can create a blog with a specific purpose. Children understand that the way in which information is presented has an impact upon the audience. They understand that blogs need to be updated regularly to maintain the audience's interest and engagement. Children can post comments and blog posts to an existing class blog. Children understand the approval process that their posts go through and demonstrate an awareness of the issues surrounding inappropriate posts and cyberbullying. Children can comment on and respond to other blogs- (try and use the Seesaw blog feature here). Children can assess the effectiveness and impact of a blog.</p> <p>Evidence- Purple Mash Saved in their folder on Group Shared</p>	<p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p>



Extreme Earth



Computer Science

Programming: Scratch 3- Create your own game

Within this unit, pupils are given the opportunity to design and develop their own numeracy based game in whatever form that may take. However, to support them in this challenge they first explore the construction of a 'model game' and are also provided further examples which they may decompose to understand how they have been programmed. Note - To support less able pupils these models could be adapted as opposed to pupils starting from scratch and suggestions for adaptations are given.

Throughout this project, pupils use Scratch 3. Once pupils have made their games, their games can be shared via a free blog for pupils across the Internet to play. This provides a genuine audience and motivation for pupils' work and a continuation of the blog work that they completed last half term.

Evidence- Plans on Seesaw, Scratch games saved in their own folder in Group Shared, Self-assessment/peer assessment on Word and saved in their own folders

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

Use sequence, selection, and repetition in programs; work with variables and various forms of input and output

Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

Spring 1

Extreme Earth



Computer Science

Digital Literacy

Networks- HTML

Children should have learned in previous years' units about the Internet as being a worldwide network of networks of computers. On this network, there are some computers called servers that hold web page information and it is this collection of interlinked web pages that make up the World Wide Web (WWW).

As this is a new computing curriculum, they may need to look at this first before tackling HTML.

Understand what HTML is and recognize HTML tags



Know a range of HTML tags and remix a web page

Create a webpage using HTML

Evidence- saved in Group Shared folder. Self-assessment on Word in their own folder

Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration

Spring 2

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Summer 1</p>	<p style="text-align: center;"><u>If We Could Talk to the Animals</u></p>  <p>Computer Science Digital Literacy Music- Purple Mash Busy Beats</p> <p>Children will make music and compose their own pieces using Busy Beats software on Purple Mash. The main elements that will be covered are- Playing with textures, playing with pitch and melody, exploring rhythm and tempo, quantization, creating an arrangement, using the recorder and creating a chord sequence.</p> <p>Evidence- Saved in Purple Mash</p>	<p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Summer 2</p>	<p style="text-align: center;"><u>If We Could Talk to the Animals</u></p>  <p>Computer Science Programming Crumble project- goal line technology</p> <p>In this project pupils create a gadget to signal if a goal has been scored in football. The device uses an ultrasonic sensor as an input trigger, and pupils can decide what happens when the sensor is triggered, for example sparkles might flash or a motor can wave a flag. Pupils are going to make their own goal detecting gadget using the Crumble and an ultrasonic sensor.</p> <p>Evidence- Pictures on Seesaw, Crumble files saved in their folders in Group Shared. Videos of Crumble sensors working saved on Seesaw. Self assessment saved on Word in their folders in Group Shared</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p>