Year 1

	Theme	National Curriculum Objectives
Autumn 1	<u>Paddington's Adventures</u> ==Digital Literacy== <u>Introduction to computing</u> 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. 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. Introduce them to Purple Mash and share their logins. Can they remember them? 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. Use 2Paint to create a picture of Paddington and save it in their My Work section of Purple Mash. <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.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content
Autumn 2	<u>Gunpowder Plot</u> ==Digital Literacy== ==Online safety== <u>National online Safety units</u> <u>Unit 1 Self-image & Identity</u> I can recognise, online or offline, that anyone can say 'no'/'please stop'/'I'll tell'/'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed or upset. If something happens that makes me feel sad, worried, uncomfortable or frightened, I can give examples of when and how to speak to an adult I can trust and how they can help. <u>Unit 2- Online Relationships</u> I can recognise some ways in which the internet can be used to communicate. I can give examples of how I (might) use technology to communicate with people I know. I can give examples of when I should ask permission to do something online and explain why this is important. I can use the internet with adult support to communicate with people I know (e.g. video call apps or services).	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

I can explain why it is important to be considerate and kind to people online and to respect their choices.

<u>Unit 3 Online Reputation</u>

I can identify ways that I can put information on the internet.

I can describe what information I should not put online without asking a trusted adult first.

<u>Unit 4- Online Bullying</u>

I can describe ways that some people can be unkind online.

I can offer examples of how this can make others feel.

I can describe how to behave online in ways that do not upset others and can give examples.

<u>Evidence</u>- Seesaw

<u>Toys Through time</u> <mark>Computer Science</mark> <u>Programming- Mazes</u> Purple Mash Unit 1.5 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. Use Code a Pillars to apply their knowledge of algorithms after completing the 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. <u>Evidence</u>- 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

Spring 2	<u>The UK</u> ==Computer Science== <u>Coding</u> Purple Mash Unit 1.7 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 If time allows at the end of the unit, children to have a go at using Daisy the Dinosaur on iPads to introduce block code. Allow children to tinker with the program and to get used to the look of block code on software other than Purple Mash. (screenshot their work for Seesaw) <u>Evidence</u>- 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
Summer 1	<u>Nurturing Nurses</u> ==Digital Literacy== ==Online safety== National online Safety units 5-8 <u>Unit 5- Managing Online Information</u> can talk about how to use the internet as a way of finding information online. I can identify devices I could use to access information on the internet. I can give simple examples of how to find information using digital technologies (e.g. search engines, voice activated searching). I know/understand that I can encounter a range of things online, including things I like and don't like as well as things which are real or make believe/a joke. I know how to get help from a trusted adult if I see content that makes me feel sad, uncomfortable worried or frightened <u>Unit 6- Health, Wellbeing & Lifestyle</u> I can identify rules that help keep us safe and healthy in and beyond the home when using technology. I can give some simple examples of these rules. I can explain rules to keep myself safe when using technology both in and beyond the home.	Recognise common uses of information technology beyond school. Use technology purposefully to create, organise, store, manipulate and retrieve digital content

	<u>Unit 7- Privacy & Security</u> I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location). I can describe who would be trustworthy to share this information with; I can explain why they are trusted. ==Digital Literacy-== <u>Technology outside school</u> Microsoft Word Purple Mash Unit 1.9 2 lessons 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) <u>Evidence</u>- Seesaw drawing including examples of technology found.	
Summer 2	<u>Continents and Oceans</u> ==Information Technology== <u>Animated stories</u> 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. <u>Evidence</u>- Work saved in their My Work section of Purple Mash. Publish examples to the Y1 noticeboard on Purple Mash	Use technology purposefully to create, organise, store, manipulate and retrieve digital content

Year 2

	Theme	National Curriculum Objectives
Autumn 1	**A Walk in the Park** Digital Literacy Online Safety – inc. recap on basic skills Begin with recapping basics, find their folder, open, save, edit on Word and Purple Mash. **Unit 1 Self-image & Identity** I can explain how other people may look and act differently online and offline. I can give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened; I can give examples of how they might get help. **Unit 2- Online Relationships** I can give examples of how someone might use technology to communicate with others they don't also know offline and explain why this might be risky (e.g. email, online gaming, a pen-pal in another school/country). I can explain who I should ask before sharing things about myself or others online. I can explain why I have a right to say, 'no' or 'I will have to ask someone'. I can explain who can help me if I feel under pressure to agree to something I am unsure about or don't want to do. I can identify who can help me if something happens online without my consent. I can explain why I should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online. **Unit 3 Online Reputation** I can explain how information put online about someone can last for a long time. I can describe how anyone's online information could be seen by others. I know who to talk to if something has been put online without consent or if it is incorrect. **Unit 4- Online Bullying** I can explain what bullying is, how people may bully others and how bullying can make someone feel. I can explain why anyone who experiences bullying is not to blame. I can talk about how anyone experiencing bullying can get help. Evidence- Tasks saved on Seesaw	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 Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Autumn 2	<u>The UK and its capital cities</u> Computer Science <u>Algorithms</u> <u>Human Crane-</u>Give each other precise instructions to complete an action <u>Barefoot CAS- Crazy Characters</u> <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. <u>BeeBots-</u> Follow BeeBot Basics lesson (BarefootCas lesson) <u>Evidence-</u> Photos of Beebot/Code a Pillar activities on Seesaw. Children explaining as a written or verbal comment on Seesaw	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	<u>Kings and Queens</u> Computer Science <u>Coding</u> Purple Mash Unit 2.1 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. Complete Purple Mash quiz at the end of the unit. <u>Evidence-</u> Purple Mash work saved in My Work area.	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	<u>Sensational Shibden</u> Digital Literacy Online Safety	Use technology purposefully to create, organise, store, manipulate and retrieve digital content

National Online Safety units 5-8

Unit 5- Managing Online Information

I can use simple keywords in search engines.

I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).

I can explain what voice activated searching is and how it might be used, and I know it is not a real person (e.g. Alexa, Google Now, Siri).

I can explain the difference between things that are imaginary, made up or make believe and things that are true or real.

I can explain why some information I find online may not be real or true

Unit 6- Health, Wellbeing & Lifestyle

I can explain simple guidance for using technology in different environments and settings (e.g. accessing online technologies in public places and the home environment).

I can say how those rules/guides can help anyone accessing online technologies.

Unit 7- Privacy & Security

I can explain how passwords can be used to protect information, accounts and devices.

I can explain and give examples of what is meant by 'private' and 'keeping things private'.

COMPUTING SUITE   Digital Literacy-

Effective Searching Purple Mash unit 2.5   3 weeks

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.

Lesson 2- adapt to topic (not dinosaurs!)

Show Kiddle as example of a child friendly search engine.

Evidence- Purple Mash work saved in the My work section on PM

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

Fire! Fire!

Summer 1

Computer Science

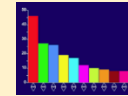Scratch jr- iPads unit

(Y1 Twinkl unit)

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

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
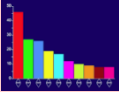
	characters to grow or shrink. Hide and show characters with an instruction block. Program two or more characters with instructions at the same time. Extend- more able coders will be able to use a repeat block for a section of instructions and specified number of time. Predict the behaviour of a character, based on a sequence of instructions, edit the colours and other features of characters or sprites and create longer sequences of more complex instructions. Evidence- Screen shots of Scratch Jr projects on Seesaw. Children to explain what they have using comment or voice comment.	Use logical reasoning to predict the behaviour of simple programs.
Summer 2	<u>Brilliant Beaches</u> Information Technology <u>Spreadsheets</u> Purple Mash Unit 2.3 Because we don't do the 2Calculate unit in year 1, the first lesson of this new unit needs to introduce some of the vocabulary and features of PM that they would have come across if they had done that unit. Use Year 1, lesson 1 and 2 of the Spreadsheets unit to introduce what spreadsheets are and how we use them. To use copying, cutting and pasting shortcuts in 2Calculate. To use 2Calcuate totalling tools. To use 2Calculate to solve a simple puzzle To explore the capabilities of a spreadsheet in adding up coins to match the prices of objects To add and edit data in a table layout. To use the data to manually create a block graph. Evidence- Purple Mash work saved in the My work section on PM	Use technology purposefully to create, organise, store, manipulate and retrieve digital content

Year 3

	Theme	National Curriculum Objectives
Autumn 1	<u>Weather and climate in the UK</u> ONLINE SAFETY Digital Literacy- <mark>Online Safety</mark> <u>National Online Safety units 1-4</u> <u>Unit 1 Self-image & Identity</u> I can explain what is meant by the term 'identity'. I can explain how people can represent themselves in different ways online. I can explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming, using an avatar, social media) and why. <u>Unit 2- Online Relationships</u> I can describe ways people who have similar likes and interests can get together online. I can explain what it means to 'know someone' online and why this might be different from knowing someone offline. I can explain what is meant by 'trusting someone online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online, including what information and content they are trusted with. I can explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried. I can explain how someone's feelings can be hurt by what is said or written online. I can explain the importance of giving and gaining permission before sharing things online and how the principles of sharing online are the same as sharing offline (e.g. sharing images and videos). <u>Unit 3 Online Reputation</u> I can explain how to search for information about others online. I can give examples of what anyone may or may not be willing to share about themselves online. I can explain the need to be careful before sharing anything personal. I can explain who someone can ask if they are unsure about putting something online. <u>Unit 4- Online Bullying</u> I can describe appropriate ways to behave towards other people online and why this is important. I can give examples of how bullying behaviour could appear online and how someone can get support.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 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

	Evidence- work on Seesaw		
Autumn 2	**Romans** Computer Science Coding Purple Mash Y3 Coding 3.1 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. 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. Evidence- work saved in their folders on Purple Mash		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	**North America** Information Technology Spreadsheets Purple Mash unit 3.3 To add and edit data in a table layout. To find out how spreadsheet programs can automatically create graphs from data. To introduce the 'more than', 'less than' and 'equals' tools. To introduce the 'spin' tool and show how it can be used to count through times tables. To introduce the Advanced mode of 2Calculate. To learn about describing cells using their addresses. Evidence- Purple Mash work saved in their folders. Photos on Seesaw		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

Spring 2	Anglo Saxons and Scots Digital Literacy Information Technology Email, Purple Mash Unit 3.5 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 If time allows, include one piece of work on Office software in this unit- either Microsoft Word/Powerpoint. Evidence- Purple Mash work saved in their folders.	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. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
Summer 1	Population and Settlements Computer Science Programming- Scratch 3- The unit focuses 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 coding/ programming units in Purple Mash so will be familiar with the block code and some of the commands. Write an algorithm in a flow chart 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 Evidence Scratch programs saved in the children's folders Photos of work completed in lessons saved on Seesaw Purple Mash quiz at the end	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

Early Civilisations

Digital Literacy-   Online Safety

National Online Safety units 5-8

Unit 5- Managing Online Information I can demonstrate how to use key phrases in search engines to gather accurate information online.

I can explain what autocomplete is and how to choose the best suggestion.

I can explain how the internet can be used to sell and buy things.

I can explain the difference between a belief, an opinion and a fact and can give examples of how and where they might be shared online (e.g. in videos, memes, posts, news stories).

I can explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed).

I can describe and demonstrate how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable worried or frightened.

Unit 6- Health, Wellbeing & Lifestyle

I can explain why spending too much time using technology can sometimes have a negative impact on anyone (e.g. mood, sleep, body, relationships). I can give some examples of both positive and negative activities where it is easy to spend a lot of time engaged (e.g. doing homework, games, films, videos).

I can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites).

Unit 7- Privacy & Security

I can describe simple strategies for creating and keeping passwords private.

I can give reasons why someone should only share information with people they choose and can trust. I can explain that if they are not sure or feel pressured, they should tell a trusted adult.

I can describe how connected devices can collect and share anyone's information with others.

Unit 8-Copyright & Ownership

I can explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause.

Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

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

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

Digital Literacy

Networks- connecting computers

To begin, the unit introduces the concepts of input, process, and output. These concepts are fundamental to all digital devices. Learners will develop their knowledge of the relationship between inputs, processes, and outputs and apply it to devices and parts of devices that they will be familiar with from their everyday surroundings.

They will then use programs in conjunction with inputs and outputs on a digital device. They will create two pieces of work with the same focus, using digital devices to create one piece of work, and non-digital tools to create the other. Learners will then compare and contrast the two approaches.

They will look at the concept of connections and moving information between connected devices. Learners will learn to explain how and why computers are joined together to form networks.

Key network components, including a server and wireless access points. Learners will examine each device's functionality and look at the benefits of networking computers.

Further develop their understanding of computer networks. They will see examples of network infrastructure in a real-world setting and relate them to the activities in previous lessons

Evidence- saved on Seesaw or in their folder on Group Shared
Quiz at the end of the unit
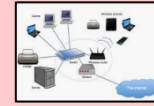
Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration

Year 4

	Theme	National Curriculum Objectives
Autumn 1	<u>Brazil</u> Digital Literacy- Online Safety <u>National Online Safety units 1-4</u> <u>Unit 1 Self-image & Identity</u> I can explain how my online identity can be different from my offline identity. I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them. I can explain that others online can pretend to be someone else, including my friends, and I can suggest reasons why they might do this. <u>Unit 2- Online Relationships</u> I can describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms). I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours. I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts, feelings and beliefs. <u>Unit 3 Online Reputation</u> I can describe how to find out information about others by searching online. I can explain ways that some of the information about anyone online could have been created, copied or shared by others. <u>Unit 4- Online Bullying</u> I can recognise when someone is upset, hurt or angry online. I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat). I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation). <u>Evidence-</u> Purple Mash work saved in their own folder. How to guide saved on Seesaw. Self-assessment on Seesaw.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 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.

Autumn 2	**Ancient Egypt** Digital Literacy- Purple Mash unit 4.7 Effective Searching Recap on learning from effective searching unit in Year 2- what can they remember? 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. 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. Evidence- Purple Mash work saved in their folder Purple Mash quiz PowerPoint saved in their own folder in Group shared- also a peer assessment of another child's work to be saved	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
Spring 1	of **Antarctic Adventure** Information Technology Animation Purple Mash unit 4.6 followed by stop motion work on iPads if time allows 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 used in a similar way but 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. Use iPads to create a 'stop motion' animation based on Antarctica . Evidence- Purple Mash work saved in their folder Purple Mash quiz Stop motion videos shared to their Seesaw account and tagged in the computing folder	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.

Spring 2

Stone- Iron age

Computer Science   Digital Literacy

Networks- The Internet

Learners will apply their knowledge and understanding of networks, to appreciate the internet as a network of networks which need to be kept secure. Learners will explore how a network can share messages with another network to form the internet. They will consider some of the network devices involved in this, such as routers, and will also discuss what should be kept in and out of a network to keep safe

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.

Evidence- saved on Seesaw.

Digital Literacy-   Online Safety

National Online Safety units 5-8

Unit 5- Managing Online Information

I can analyse information to make a judgement about probable accuracy, and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others.

I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites).

I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers, in-app purchases, pop-ups) and can recognise some of these when they appear online.

I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true.

I can explain that technology can be designed to act like, or impersonate, living things (e.g. bots) and describe what the benefits and the risks might be.

I can explain what is meant by fake news; for example, why some people will create stories or alter photographs and put them online to pretend something is true when it isn't.

Unit 6- Health, Wellbeing & Lifestyle

I can explain how using technology can be a distraction from other things in a positive and negative way.

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

Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

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

I can identify times or situations when someone may need to limit the amount of time they use technology. For example, I can suggest strategies to help with limiting this time.

<u>Unit 7- Privacy & Security</u>

I can describe strategies for keeping personal information private, depending on context.

I can explain that internet use is never fully private and is monitored.

I can describe how some online services may seek consent to store information about me. I know how to respond appropriately and who I can ask if I am not sure.

I know what the digital age of consent is and the impact this has on online services asking for consent.

<u>Unit 8-Copyright & Ownership</u>

When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.

I can give some simple examples of content which I must not use without permission from the owner (e.g. videos, music, images).

<u>Evidence</u> Seesaw

| Summer 1 | <u>Cragg Vale Coiners</u> Information Technology <u>Spreadsheets</u> Purple Mash unit 4.3 To explore how the numbers entered into cells can be set to either currency or decimal. To explore the use of the display of decimal places. To find out how to add formulae to a cell. To explore how tools can be combined to use 2Calculate to make number games. To explore the use of the timer, random number and spin button tools To use the line graphing tool in 2Calculate with appropriate data. To interpret a line graph to estimate values between data readings. To use the currency formatting tool in 2Calculate. To use 2Calculate to create a model of a real-life situation. To use the functions of allocating value to images in 2Calculate to make a resource to teach place value. <u>Evidence-</u> Purple Mash work saved in their folder. | 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. |
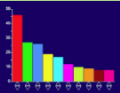
Summer 2	<u>Yorkshire</u> <mark>Computer Science</mark> <u>Scratch 3</u><u>- Smoking Car</u> Using a keyboard input to control aspects of the game Simple Sequence of code Children to play the game without looking at the code. Ask pupils to work in pairs to identify (decompose) all the features of the game (background, car, direction keys, move key, pen up and down key, clear key) Create their own road by making a new backdrop Add in the pen extension Show pupils how to create a roadway that uses only right angles using the line drawing tool. Encourage them to include a start and finish colour. Hand out the sequence help cards to those who need them and challenge pupils to write a sequence of instructions that takes the car from start to finish when green flag is pressed They can use the blocks already programmed to help them plan their route or draw arrows on a whiteboard to create an algorithm first. <u>Evidence</u> Scratch programs saved in the children's folders Photos on Seesaw	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

Year 5

	Theme	National Curriculum Objectives
Autumn	Space Digital Literacy Online Safety. National Online Safety units 1-4 Unit 1 Self-image & Identity I can explain how identity online can be copied, modified or altered. I can demonstrate how to make responsible choices about having an online identity, depending on context. Unit 2- Online Relationships I can give examples of technology-specific forms of communication (e.g. emojis, memes and GIFs). I can explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my/our fault. I can describe some of the ways people may be involved in online communities and how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities and social media groups). I can explain how someone can get help if they are having problems and identify when to tell a trusted adult. I can demonstrate how to support others (including those who are having difficulties) online. Unit 3 Online Reputation I can search for information about an individual online and summarise the information found. I can describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect. Unit 4- Online Bullying I can recognise that online bullying can be different from bullying in the physical world and can describe some of those differences. I can describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying. I can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult. I can identify a range of ways to report concerns and access support in school and at home about online bullying. I can explain how to block abusive users.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 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.

I can describe helpline services which can help people experiencing bullying and how to access them (e.g. Childline or The Mix).

Evidence- Purple Mash work saved in their folder

Early Islamic civilisations

Digital Literacy- Online Safety

National Online Safety units 5-8

Unit 5- Managing Online Information

I can explain the benefits and limitations of using different types of search technologies such as voice-activation search engines. I can explain how some technology can limit the information I am presented with, for example voice-activated searching giving one result.

I can explain what is meant by 'being sceptical'; I can give examples of when and why it is important to be sceptical.

I can evaluate digital content and can explain how to make choices about what is trustworthy, for example differentiating between adverts and search results.

I can explain key concepts, including information, reviews, fact, opinion, belief, validity, reliability and evidence.

I can identify ways the internet can draw us to information for different agendas (e.g. website notifications, pop-ups, targeted ads).

I can describe ways of identifying when online content has been commercially sponsored or boosted (e.g. by commercial companies or by vloggers, content creators, influencers).

I can explain what is meant by the term 'stereotype', how stereotypes are amplified and reinforced online and why accepting stereotypes may influence how people think about others.

I can describe how fake news may affect someone's emotions and behaviour and explain why this may be harmful.

I can explain what is meant by a hoax. I can explain why someone would need to think carefully before they share.

Unit 6- Health, Wellbeing & Lifestyle

I can describe ways technology can affect health and well-being positively (e.g. mindfulness apps) and negatively.

I can describe some strategies, tips or advice regarding technology to promote health and wellbeing.

I recognise the benefits and risks of accessing information about health and well-being online and how we should balance this with talking to trusted adults and professionals.

I can explain how and why some apps and games may request or take payment for additional content (e.g. in-app purchases, loot boxes) and explain the importance of seeking permission from a trusted adult before purchasing.

Unit 7- Privacy & Security

Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

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.

Autumn

I can explain what a strong password is and demonstrate how to create one.

I can explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others.

I can explain what app permissions are and can give some examples.

Unit 8-Copyright & Ownership

I can assess and justify when it is acceptable to use the work of others.

I can give examples of content that is permitted to be reused and know how this content can be found online.

Evidence- Seesaw

	Water World	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.
Spring 1	Information Technology Spreadsheets Purple Mash Unit 5.3 To use formulae within a spreadsheet to convert measurements of length and distance. To use the count tool to answer hypotheses about common letters in use. To use a spreadsheet to model a real-life problem. To use formulae to calculate area and perimeter of shapes. To create formulae that use text variables. To use a spreadsheet to help plan a school cake sale. Evidence- Purple Mash **work saved in their folder** Purple Mash quiz	
Spring 2	Trade and Resources Computer Science Programming Scratch 3- Crab Game Decomposition- decompose the full game by playing it and unpicking what thy think the code will contain Use costume changes to create an animated effect on the crab sprite Loops- to make the game run until stopped	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

	Conditional selection	
	Variable- to collect score	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
	Children will design a game to 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 and broadcast commands	
	Evidence Scratch programs saved in the children's folders	
	Seesaw- photos and captions of the children's progress through the unit	
Summer 1	**Ancient Greece**	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..
	Information Technology	
	Animation - Powerpoint animation of the phases of the moon. Recap on the learning done in Autumn during the space topic.	
	Look at the y3 coding unit lesson 5 & 6- moon phases. Look at the phases of the moon and how they change across a month. Look at the code and unpick it together. Have cards of each phase of the moon for children to put in order in pairs.	
	Children will recap the phases of the moon and why we see it differently at different point in the month. When they understand the phases, they will create a PowerPoint to show the moon's phases.	
	They will learn how to create and insert the shapes needed, change the colour, add transitions between slides and how to make it look like the phases are changing. They will add labels to each phase.	
	Evidence Moon animations saved in the children's folders	
	Seesaw- photos and captions of the children's progress through the unit	
Summer 2	**Europe and London**	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
	Computer Science	
	Digital Literacy	
	Networks- Y5	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
	Learners develop their understanding of computer systems and how information is transferred between systems and devices. Learners consider small-scale systems as well as large-scale systems. They explain the input, output, and process aspects of a variety of different real-world systems. Learners discover how information is found 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.	

Year 6

	Theme	National Curriculum Objectives
Autumn 1	**World War 2** Digital Literacy- Online Safety **National Online Safety units 1-4** **Unit 1 Self-image & Identity** I can identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups and explain why it is important to challenge and reject inappropriate representations online. I can describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help online and offline. I can explain the importance of asking until I get the help needed. **Unit 2- Online Relationships** I can explain how sharing something online may have an impact either positively or negatively. I can describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not. I can describe how things shared privately online can have unintended consequences for others, for example screen-grabs. I can explain that taking or sharing inappropriate images of someone, for example embarrassing images, even if they say it is okay, may have an impact for the sharer and others. I can also explain who can help if someone is worried about this. **Unit 3 Online Reputation** I can explain the ways in which anyone can develop a positive online reputation. I can explain strategies anyone can use to protect their digital personality and online reputation, including degrees of anonymity. **Unit 4- Online Bullying** I can describe how to capture bullying content as evidence (e.g. screen-grab, URL, profile) to share with others who can help me. I can explain how someone could report online bullying in different contexts. Evidence- Seesaw	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Autumn 2	<u>Crime and Punishment</u> ==Information Technology== <u>Blogging</u> Purple Mash unit 6.4 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. Evidence- Purple Mash Seesaw	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.
Spring 1	<u>Extreme Earth</u> ==Digital Literacy-== ==Online Safety== <u>National Online Safety units 5-8</u> <u>Unit 5- Managing Online Information</u> I can explain how search engines work and how results are selected and ranked. I can explain how to use search technologies effectively. I can describe how some online information can be opinion and can offer examples. I can explain how and why some people may present opinions as facts, and why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online, for example advertising, ad targeting and targeting for fake news. I understand the concept of persuasive design and how it can be used to influences peoples' choices. I can demonstrate how to analyse and evaluate the validity of facts and information, and I can explain why using these strategies is important.	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

I can explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this.

I can describe the difference between online misinformation and disinformation.

I can explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this might happen, for example the sharing of misinformation or disinformation.

I can identify, flag and report inappropriate content.

Unit 6- Health, Wellbeing & Lifestyle

I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.

I recognise and can discuss the pressures that technology can place on someone and how and when they could manage this.

I can recognise features of persuasive design and how they are used to keep users engaged (current and future use).

I can assess and action different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise)

Unit 7- Privacy & Security

I can describe effective ways people can manage passwords, for example storing them securely or saving them in the browser.

I can explain what to do if a password is shared, lost or stolen.

I can describe how and why people should keep their software and apps up to date, for example auto updates.

I can describe simple ways to increase privacy on apps and services that provide privacy settings.

I can describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing).

I know that online services have terms and conditions that govern their use.

Unit 8-Copyright & Ownership

I can demonstrate the use of search tools to find and access online content which can be reused by others.

I can demonstrate how to make references to, and acknowledge, sources I have used from the internet.

Evidence- Seesaw

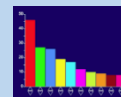|		
Spring 2 and Summer 1	**Extreme Earth** Information Technology Spreadsheets- Purple Mash unit 6.3 To use a spreadsheet to investigate the probability of the results of throwing many dice. To use a spreadsheet to calculate the discount and final prices in a sale. Create a formula to help work out the prices of items in the sale. To use a spreadsheet to plan how to spend pocket money and the effect of saving money. Children can use a spreadsheet to model a real-life situation and come up with solutions that can be applied to real life. To use a spreadsheet to plan a school charity day to maximise the money donated to charity. Evidence- Purple Mash work saved in their folder Purple Mash quiz	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.
Summer 2	**Trade and Resources (for this year only)** Computer Science Programming Scratch 3- Create your own maths 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	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. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output

Summer 2	**The Viking and Anglo-Saxon struggle for the Kingdom of England** Computer Science Programming Crumble project- goal line technology 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. Evidence- Pictures on Seesaw, Crumble files saved in their folders in Group Shared. Videos of Crumble sensors working saved on Seesaw.	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