

Computing Curriculum

Learning as a family in Jesus, through Love, Hope and Forgiveness

'with God all things are possible.' Matthew 19:26



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Resources in school

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Overview							
Online Safety/ Digital Literacy Computer Science			Computer Science	Infor	mation Technology		
AGE PHASE	YEAR Group	AU	TUMN	SPRING		SUMMER	
	Whole school enrichment	Year 4 Digital Leaders QR reading displays Safer Internet Day- February					
				QR codes in EYFS as pa Year 4 + 5 after s	art of continuous provision chool computing club		
				EYFS Tw	vinkl E-books		
				Virtual Re	eality headsets		
		Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve
	R	<u>Self- image and</u> <u>identity</u>	<u>Online relationships</u>	Online reputation	<u>Online bullying</u>	<u>Managing online</u> <u>information</u>	<u>Privacy and security</u>
		What are the different ways that you can tell someone 'No'?	How can we stay in touch with people we know?	How is information put on the internet?	How are people unkind online?	What devices can I use to access information on the internet?	What adults do we trust with our personal information?
EYFS		<u>All about me</u> Exploring Technology	<u>Oh Help! Oh No! It's the</u> <u>Gruffalo!</u> Photography and Digital Art Mini Mash	Around the World Computational thinking and Coding	Beware of the Bear! Multimedia	<u>People who help us</u> Typing	Brilliant Bugs Beasts Grouping and sorting



		Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve
		<u>Self- image and</u> <u>identity</u>	<u>Online relationships</u>	Online reputation	<u>Online bullying</u>	<u>Managing online</u> <u>information</u>	<u>Privacy and security</u>
	1	Who can you trust?	Why is it important to be	what is personal information?	How should we behave online?	What should I do if I	why is it important to ask an adult before
	•		respect?			encounter things online	sharing personal
KS1						that I don't like?	information?
		Purple Mash	Purple Mash	Purple Mash		Purple Mash	Purple Mash
		Unit 1.1	Unit 1.2	Unit 1.4	Purple Mash	Unit 1.7	Unit 1.8
		Exploring PurpleMash	Grouping and sorting	Lego Builders	Unit 1.6	Coding	Spreadsheets
					Animated Story Books.		
			Purple Mash	Purple Mash			Purple Mash
			Unit 1.3	Unit 1.5			Unit 1.9
			Pictograms	Maze Explorers			Technology outside
							of school
		Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve
		<u>Self- image and</u>	<u>Online relationships</u>	Online reputation	<u>Online bullying</u>	<u>Managing online</u>	Privacy and security
		<u>identity</u>		How can private and personal	How does bullying make	information	What devices do
	2	What might make you	to communicate with others?	information be seen by others?	people feel?	How do I navigate a webpage?	people have in their
		womed online?					the internet and how
							can passwords be
							protected?
		Purple Mash	Purple Mash	Purple Mash	<u>Purple Mash</u>	Purple Mash	Purple Mash
		Unit 2.1	Unit 2.7	Unit 2.3	Unit 2.4	Unit 2.6	Unit 2.8
		Coding	Making Music	Spreadsheets	Questioning	Creating Pictures	Presenting Ideas
			Purple Mash				
			Unit 2.5				



			Effective searching				
		Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve
		Self-image and identity	Online relationships	Online reputation	Online bullying	Managing online information	Privacy and Security
LKS2	3	What is an 'online identity'?	How should I treat others online?	Why should we be careful sharing information online?	What is the appropriate way to behave towards others online?	How do I know if information online is accurate and reliable?	What simple strategies are there for creating and keeping passwords private?
		Purple Mash	Purple Mash	Purple Mash	Purple Mash	Purple Mash	Purple Mash
		Unit 3.4	Unit 3.5	Unit 3.6	Unit 3.1	Unit 3.3	Unit 3.7
		Touch Typing	Email	Branching Databases	Coding	Spreadsheets	Simulations
						Purple Mash	Purple Mash
						Unit 3.8	Unit 3.9 Presenting
						Graphing	Ideas (Microsoft PowerPoint)
		Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve
	4	<u>Self-image and</u> <u>identity</u> How can we examine online profiles?	Online relationships How to recognise healthy and online relationships	<u>Online reputation</u> How can information be created, copied or shared by others?	Online bullying How are people bullied online and why should we think about what we post?	<u>Managing online</u> <u>information</u> How can I analyse information to make an accurate judgement?	Privacy and security How can we manage passwords and what should we do if they're lost or stolen?
		Purple Mash	Purple Mash	Purple Mash	Purple Mash	Purple Mash	Purple Mash
		Unit 4.8	Unit 4.4	Unit 4.1	Unit 4.5	Unit 4.3	Unit 4.6
		Hardware Investigators	Writing for different audiences	Coding	Logo	Spreadsheets	Animation
			addiences				Purple Mash
							Unit 4.7
							Effective Searching



		Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve
UKS2	5	Self-image and identity How can online identity be copies, modified or altered?	<u>Online relationships</u> How can we help others if they are having	Online reputation How can I search effectively online?	Online bullying Who can I report concerns to inside and outside of school?	<u>Managing online</u> <u>information</u> What are the benefits and limitations of using different search technologies?	Privacy and Security What is the different between the digital age of consent and age restrictions?
		Purple Mash	Purple Mash	Purple Mash	Purple Mash	Purple Mash	Purple Mash
		Unit 5.4	Unit 5.6	Unit 5.1	Unit 5.5	Unit 5.3	Unit 5.7
		Databases	3D Modelling	Coding	Game Creator	Spreadsheets	Concept maps
		Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve	Project Evolve
	6	<u>Self-image and</u> identity	Online relationships	Online reputation	Online bullying	Managing online information	Privacy and Security
		How does the media	what's inappropriate?	online reputation?	what are the different ways/methods of reporting	How can I search effectively	now does online
		stereotype?			concerns and bullying behaviour?	and recognise trustworthy sources of information?	to gain money?
		Purple Mash	Purple Mash	Purple Mash	Purple Mash	Purple Mash	Purple Mash
		Unit 6.1	Unit 6.4	Unit 6.6	Unit 6.7	Unit 6.5	Unit 6.3
		Coding	Blogging	Networks	Quizzing	Text adventures and website building	Spreadsheets (Microsoft Excel)



EYFS



EYFS - Year R Term 1 – All about Me- Exploring Technology/ Computing networks

EYFS early learning goals	Knowledge and skills	Resources
There are no specific early learning goals There are no specific early learning goals that are directly linked to computing. Despite this, use of technology and development of computational thinking can be incorporated into all areas of the EYFS curriculum. Continuous provision ideas and additional computing ideas Interactive whiteboard: Children take part in whole class games and use touch screen QR codes: Children use QR codes to find out about learning	Digital Literacy Exploring Technology Links with UTW Through continuous provision, children will begin to explore technology they encounter in home and at school through the use of role play (old mobile phones, camera laptops, remote control, type writers). Additionally, Children will also be exposed to the Interactive whiteboard and tablets. I can show an interest in technological toys. I can recognise that a range of objects can be used in places such as home and schools I can operate simple classroom equipment (IWB/tablets) I can play on a touch screen and use a keyboard	<image/>
Vocabulary Button, on, off, mouse, remote, camera, keyboard, phone.		
Future learning	3	
 Begin to explore Purple Mash and begin to understand how to important. Complete a unit of work on 'Technology around us' where they how they can belo us 	log in and out safely and understand why that is will look at examples of technology in the classroom and	



EYFS - Year R Term 2 – Oh Help! Oh No! It's the Gruffalo! - Photography and Digital Art Knowledge and skills **EYFS** early learning goals Resources Information Technology There are no specific early learning goals that are directly linked to computing. Despite this, use of technology and development of Photography and Digital Art computational thinking can be incorporated into all areas of the EYFS Links with EAD curriculum. Children will be introduced to 'Mini Mash' where they Continuous provision ideas and additional computing ideas will experiment with 2Paint- a painting app to explore Interactive whiteboard: Children take part in whole class games and use paint and brush tools. Additionally, children will use mun tablets to take photographs. mash touch screen **QR codes:** Children use QR codes to find out about learning I can turn a tablet on and off . I can use a painting app and explore the paint and brush tools I can create shapes on a screen ٠ I can take a photograph using a digital device . Vocabulary Draw, pencil tool, brush tool, shapes, screen, photograph. **Future learning** In Year 1, children will complete a unit of work on 'Animated Story Books' where they will: ٠ Create an animated picture. Know how to add animation, sound, voice, and music to a picture. ٠



EYFS - Year R Term 3 – Around the World – Computational thinking and coding					
EYFS early learning goals	Knowledge and skills	Resources			
There are no specific early learning goals that are directly linked to computing. Despite this, use of technology and development of computational thinking can be incorporated into all areas of the EYFS curriculum.	<u>Computer Science</u> <u>Computational thinking and Coding</u> Links with UTW Through continuous provision, children will begin to explore algorithms and	GO STOP Forward Backward			
Handwriting: Writing repeater on tablets to support handwriting Photo taking: Children use iPads independently to take photos of learning QR codes: Children use QR codes to find out about learning Mini Mash- 2Go coding game	 develop their computational thinking to encourage problem solving. I can use directional language to describe a journey I can follow instructions as part of a practical activity and can fix it (debug) when things go wrong. I can plan a route for a coding robot I know that an algorithm is a set of instructions. 				
V	ocabulary	-			
Algorithm, instructions, backwards, forwards, moving.					
Fut	-				
 In Year 1, children will: Complete a unit of work on coding using Purple Mash. Develop their understanding of instructions and predict what n Use code to plan and make a computer program. 	night happen when they're followed.				



EYI	-S - Year R Term 4 – Beware of the Bear – Multimedia	
EYFS early learning goals	Knowledge and skills	Resources
There are no specific early learning goals that are directly linked to computing. Despite this, use of technology and development of computational thinking can be incorporated into all areas of the EYFS curriculum. Continuous provision ideas and additional computing ideas Handwriting: Writing repeater on tablets to support handwriting Photo taking: Children use iPads independently to take photos of learning QR codes: Children use QR codes to find out about learning Mini Mash- Mash cams roleplay- recording Mini Mash- 2Create on Purple Mash (Goldilocks, bear hunt and the Three Bears song) Coding Instructions- Children create a route for Little Red Riding Hood Links with PSHCE unit 'To select and use technology for particular purposes'	Information Technology Multimedia Links to EAD Through continuous provision and adult guidance, children will present and communicate their learning in a variety of ways using apps and mini mash on tablets. They will play back their captured recordings, demonstrating confidence and increasingly in control. They will be encouraged to explore ways of making and listening to sounds using simple programs and age-appropriate apps. Children can use tablets to record/video performing of Bear Hunt and Goldilocks. Children can use Mini Mash to explore creating music. I know the difference between a photograph and a video I can record a short video using a tablet I can watch my videos back I can record sounds/voices in story telling	Music and sounds Image: Comparison of the source of the so
Cound record video abote alow	/ocabulary	
	tura laguning	
Fu In Year 2, children will complete a unit of work on purple mash 'Makin		
Add sounds to a tune		
 Express how music can be used to show feelings 		



E	YFS - Year R Term 5 – People Who Help Us - Typing	
EYFS early learning goals	Knowledge and skills	Resources
There are no specific early learning goals that are directly linked to	Information Technology	
computing. Despite this, use of technology and development of computational thinking can be incorporated into all areas of the EYFS curriculum.	Typing Through continuous provision and adult guidance, children will begin to explore word processing through simple typing exercises and role play.	
Continuous provision ideas and additional computing ideas		
Handwriting: Writing repeater on tablets to support handwriting Photo taking: Children use iPads independently to take photos of learning QR codes: Children use QR codes to find out about learning Mini Mash: Mash cams roleplay <i>people who</i> <i>help us</i> . Role play: Use of walkie talking and technology linked to 'People who help us'. Recording on tablets- recording each other being different 'people who help us'. 2Create on Purple Mash.	 People who help us role play- area with desktop computer, mouse and keyboard. I can play on a touch screen game and use a keyboard/computer/mouse in role play I can type letters with increasing confidence using a keyboard and tablet. 	
V	ocabulary	
Sound, record, video, photo, play.		
Fut	ure learning	
 Add sounds to a tune Express how music can be used to show feelings 	music where they will:	



EYFS - Year R Term 6 – Brilliant Bugs and Beasts - Data handling					
EYFS early learning goals	Knowledge and skills	Resources			
There are no specific early learning goals that are directly linked to computing. Despite this, use of technology and development of computational thinking can be incorporated into all areas of the EYFS curriculum. Continuous provision ideas and additional computing ideas Handwriting: Writing repeater on tablets to support handwriting Photo taking: Children use iPads independently to take photos of learning QR codes: Children use QR codes to find out about learning Mini Mash: Mini beast digital painting	Computer science Data handling Links with maths Through continuous provision and adult guidance, children will begin to complete simple sorting activities into different categories. Colours, shape, etc. Grouping, sorting and data handling can be taught as a whole class computing lesson using NCEE Grouping and sorting I can sort physical objects, take a picture and discuss what I have done. I can identify a chart. I can present simple data (information) on a digital advice.				
\\	ocabulary				
Sort, group, data.	Can You Sort the Minibeasts?				
In Year 2, children will complete a unit of work on purple mash 'Making Add sounds to a tune Express how music can be used to show feelings					



Year 1



KS1 - Year 1 – Term 1- Unit 1.1 Exploring Purple Mash						
National Curriculum Objective	Sticky Knowledge	skills	Vocabulary			
 Use technology safely and respectfully, keeping person information private; identify where to go for help and support when they have I know how to log in and out safely and understand why that is important. I can enter my username and password. I can find, name and save 		Login, Username, log out, my work, Password, Avatar, Notification, Topics, Tools, Save.				
concerns about content or contact the internet	 I know how to create an 	my work in my online	Additional resources			
or other online technologies.	avatar and understand how this is used.I know that my personal folders are a private space.	folder.				
Prior Learning	Key Que	estion(s)	Future Learning			
 In EYFS: Children will have been exposed to Mini Mash and can log themselves in and out of a computer/iPad. 	 What is a password and why should we keep them safe? What is a digital avatar? Where is my work stored on Purple Mash? 		 In Year 2, children will: Know how to search information on a search engine Know what is meant by a digital footprint Understand the importance of privacy online. 			

KS1 - Year 1 – Term 2a – Unit 1.2 Grouping and Sorting					
National Curriculum Objective	Sticky Knowledge	skills	Vocal	bulary	
 use technology purposefully to create, organise, store, manipulate and retrieve digital content 	 I know that objects can be counted, grouped and 	 I can label objects I can identify that objects 	Sort, Criteria, groups	1	
	 sorted depending on certain criteria I know what is meant by 'data' I know that data can be represented in picture format I know how to use technology purposefully to create, organise, store, manipulate and retrieve digital content (Use of 	 can be counted I can describe group and record objects I can add sound, text and images to my digital content 	Additional resources NCEE unit of work on 'Grouping and Sorting'. <u>Grouping</u> and sorting 	Possible cross curricula linksMaths: Grouping and sorting shapes based on number of sides, corners etc.Science: Grouping and sorting animals based on characteristics.	



		\checkmark
	text, sound and images) change content on a file	
		Purple Mash resources
		2Do It Yourself
Prior Learning	Key Question(s)	Future Learning
In EYFS, children should have: Explored grouping and sorting through continuous provision Through continuous provision and adult guidance, children will begin to complete simple sorting activities into different categories. <i>Colours, shape, etc</i>	 In what ways can we sort objects? What is 'data'? 	 In Year 2, children will complete a questioning unit where they will: Enquire into different data handling tools Use questioning to separate and group information Identify items using binary trees Use a database for more complex search questions

KS1 - Year 1 – Term 2b – Unit 1.3 Pictograms					
National Curriculum Objective	Sticky Knowledge	Skills	Voca	bulary	
 To use technology purposefully to create, organise, store, manipulate and retrieve digital content 	 I know what is meant by 'data'. I know that data can be represented in picture format and this is known as a 'pictogram'. I know how to contribute to a class pictogram and why this is helpful I know how to arrange data in picture format I know how to contribute to a class pictogram 	 I can represent data in picture format I can contribute to a class pictogram 	pictogram, data, collate, com record Additional resources	pare, results. title, collect data, results. Possible cross curricula links Maths- Sorting and grouping data into pictograms. sh resources ZCount	
Prior Learning	Key Que	estion(s)	Future	Learning	
In EYFS, children should have: Explored grouping and sorting	Why do we use pictograms?		In Year 2, children will:		
through continuous provision Through continuous provision			Use 2Calculate to co	llect data and produce a graph	



		✓
and adult guidance, children will begin to complete simple sorting activities into different categories. <i>Colours, shape, etc</i>	What is meant by 'data'?	 Enquire into different data handling tools Use questioning to separate and group information
In a previous Year 1 unit, children should have learnt:		
 What is meant by 'data' 		
• That objects can be counted, grouped and sorted		
depending on certain criteria.		

KS1 - Year 1 – Term 3a – Unit 1.4 Lego builders					
National Curriculum Objective	Sticky Knowledge	Skills	Vocal	Vocabulary	
 understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous 	 I know that programs are executed by following precise instructions 	 I can begin to understand that an algorithm is a set of instructions 	Instruction, Algorithm, code,	Computer, Program, Debug.	
instructionscreate and debug simple programs	 I know that not following instruction can make the task tricky to complete. I know how to work out what is wrong when the 	wingI can consider precisethecommands for a specificte.purposeoutI can combine forwardstheand backwards commandstr into make a sequence	Unplugged activities- <u>Coding</u> and algorithms	English- Instruction writing Maths- Directional language	
	steps are out of order in		Purple Mash resources		
	 I know simple directional language such as: forwards, backwards, left and right. 		Paint F	Projects	
Prior Learning	Key Que	estion(s)	Future	Learning	
 In EYFS, children: understand that instructions will lead to an outcome Know directional words: forwards; backwards; left; right Talk about the movement of floor toys/robots. 	 What is an 'algorithm'? What would happen if instru Why do we need instruction 	ctions are out of order? s?	In Year 2, children will: Learn to use logical d questioning unit of w Know to forward plan Know what is meant	lecision processing through a vork n to achieve a solution by an algorithm.	



KS1 - Year 1 – Term 3b – Unit 1.5 Maze Explorers					
National Curriculum Objective	Sticky Knowledge	skills	Vocabul	ary	
 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 	 I know that direction keys allow me to move forwards, backwards, left and right I know that we control computers by giving them instructions. I am beginning to understand how to make good guesses about what might happen in a program I know how to create and debug a simple algorithm 	 I can combine forwards and backwards commands to make a sequence I can choose a command for a given purpose I can alter and debug the sequence as necessary 	Instruction, Algorithm, Computer, F command Additional resources Unplugged activities- <u>Coding and</u> <u>algorithms</u> Bee-bot emulator <u>https://beebot.terrapinlogo.com/</u> Light bot- programming and directional language <u>https://lightbot.com/</u> Purple Mash r	Program, Debug, left and right, nd. Possible cross curricula links English- instruction writing. PE- Giving commands, instructions and creating sequences. esources	
Prior Learning	Key Que	estion(s)	Future Lea	rning	
In a previous unit, children should:	What do the direction keys	allow us to do?	In Year 2, children will:		
 Have gained an understanding of how to make logical decisions 	How do we control compute	ers?	 become familiar with a co Know how to logically pla 	ode environment n a sequence	
 Understand how to sequence instructions Have an understanding of when we might use instructions and how we follow them 			Know how to debug skills		

KS1 - Year 1 – Term 4 – Unit 1.6 Animated Story Books					
National Curriculum Objective	Sticky Kr	nowledge	Voca	bulary	
Use technology purposefully to create, organise, store, manipulate and retrieve digital content	 I know that 'copy' and 'paste' allows me create additional pages. I know the differences between traditional story books and e-books I know that adding animation, sound, voice 	 I can use the 'copy' and 'paste' function I can tell the difference between traditional story books and e-books I can add sound, voice and music to a picture. 	Animation, E-Book, Font, File, S background, clip-art, font, text Additional resources Puppet pals (tablet and iPad app)- cartoon animation app	Possible cross curricula links English/reading- Creating their own story books related to their class text	



	 and music to a picture can improve my story I know that an animated story is where the images in the foreground move 	World book day- Create an animated story related to their favourite book Purple Mash resources Image: Constraint of the image of the
Prior Learning	Key Question(s)	Future Learning
 In EYFS, children should: Have an understanding of traditional story books In a previous unit, children should: Have used to design to create their own avatar Explored paint projects to create simple designs 	 What is an animated story? How can I make my story better? What does the 'copy' and 'paste' function do? 	 In year 2, children will: To know how to use art effects and collage effects To know how to digitally create music and sound effects To explore how stories can be presented in different ways
		 To know how to sequence programs to create animation effects.

KS1 - Year 1 – Term 5 – Unit 1.7 Coding				
National Curriculum Objective	Sticky Kn	owledge	Vocabulary Additional resources	
 create and debug simple programs use logical reasoning to predict the behaviour of simple program 	 I know that coding means to write instructions. 	 I can use background and objects in my digital content 	Action, Algorithm, Background, C Execute, Input, Instructions, Obje Sound, when clicked, Scene.	Code, Command, Debug, Event, ect, Properties, Output, Run, Scale,
 use technology purposefully to create, organise, 	I know that a	 I can design my code 	Additional resources	Possible cross curricula links
store, manipulate and retrieve digital content	 background is an image that does not change and an object is an item in a program that can be given instructions. I know how to make good guesses of what is going to happen in program I know that designing my code is helpful as a 	 before creating my digital content I can debug code I can predict what is going to happen next 	Unplugged activities- <u>Coding and algorithms</u> <u>Debugging algorithms</u> Light bot <u>https://lightbot.com/</u> Scratch <u>https://scratch.mit.edu</u> Bee-bot emulator	English- instruction writing. PE- Giving commands, instructions and creating sequences. Project- create a code related to the project 'creatures'



	 means of having a clear idea of what I want my code to do. I know that programs can be created and altered. I know how to work out what is wrong when the steps are out of order in instructions 		https://beebot.terrapinlogo.com Purple Mash	e chimp
Prior Learning	Key Quest	ion(s)	Future Le	earning
 In EYFS, children: understand that instructions will lead to an outcome Know directional words: forwards; backwards; left; right Talk about the movement of floor toys/robots 	 What is coding? Why is it useful to design before How can we alter/change pro What is the different between 	ore coding? ograms? n the background and the object?	In Year 2, children will: Learn how to use algorith Know how to debug Know how to use forward	ms, timers and buttons. I planning to achieve a solution.

KS1 - Year 1 – Term 6a- Spreadsheets				
National Curriculum Objective	Sticky Knowledge	Skills	Vocal	oulary
 understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions 	 I know that a spreadsheet represents information I know that a spreadsheet is made up of rows and 	 I can recognise what a spreadsheet should look like I can explain what rows 	Arrow keys, Backspace key, Cursor, Columns, Cells, Clipart, Count tool, delete key, rows, image toolbox, lock tool, move cell tool, speak tool, spreadsheet.	
	columns	and columns are	Additional resources	Possible cross curricula links
	 I know how to add images to a spreadsheet and the 	 I can add images to a spreadsheet 		Maths- data collection
	benefit of doing so	 I can give images a value 	Purple Mas	h resources
	 I know that entering operators such as +, - or x in the cells and an = sign, will perform the simple calculations. 	 I can save and open sheets I am beginning to use a spreadsheet to perform a simple calculation 	9 × 2Calce	3 Jlate
Prior Learning	Key Question(s)		Future I	earning
In EYFS, children should have: Explored grouping and sorting	What does a spreadsheet look like?		In Year 2, children will:	
through continuous provision Through continuous provision	 How could you use a spread 	sheet to add up values?	Complete a unit	of work on 'Spreadsheets'
	 How can you add images to your spreadsheet? 		where they will	begin to understand how to



and adult guidance, children will begin to complete simple	use copy and paste, totalling tools, addition,
sorting activities into different categories. Colours, shape, etc	table layout and how to use block graphs.
	 Know how to represent data (Pictograms and
In a previous Year 1 unit, children should have learnt:	databases)
What is meant by 'data'	 Know how to use databases to search for
That objects can be counted, grouped and sorted depending	information.
on certain criteria.	

KS1 - Year 1 – Term 6b- Technology outside school					
National Curriculum Objective	Sticky Knowledge	Skills	Voca	bulary	
 To recognise common uses of information 	 I know what is meant by 	I can explain what is	Computer, Technology		
technology beyond school	'technology'	meant by 'technology'	Additional resources	Possible cross curricula links	
	 I know different examples 	I can record examples of	NCEE unit of work		
	of technology are in school	technology outside of	Technology around us		
	and at home	school			
	I know how technology				
	makes our lives easier				
			Purple Ma	sh resources	
			2Publ	ish Plus	
Prior Learning	Key Que	estion(s)	Future	Learning	
In EYFS, as part of the Project Evolve online Safety, children	 What is technology? 		In Year 2, children will comple	te a unit on 'Effective	
completed a unit of 'Managing online information' where	 How does technology make 	our lives easier?	Searching' where they will:		
they should have:	 What examples can you give 	e of technology at school?	 Develop an understa 	nding of the internet	
 Learnt about how they can find information on the internet 	What examples can you give	e of technology at home?	Know how to identify	y parts of a web search engine	
 Identified devices that could be used to access 			From EYFS-Year 6, ch	nildren take part in online safety	
information on the internet.			lessons, where they	will look at the safe use of	
Children will have had access to iPads, laptops and			communicating with	a range of technology.	
use of the class interactive whiteboard.					



Year 2



	KS1 - Ye	ar 2 – Term 1 – 2.1 Codin	g	
National Curriculum Objective	Sticky Knowledge	Skills	Voca	abulary
 To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. To create and debug simple programs To use logical reasoning to predict the behaviour of simple programs 	 I know what an algorithm is and can explain that this is a set of instructions. I know that algorithms follow a sequence I know how to debug simple programs I know that different object types can do different actions such as up, down and stop. I know what 'debugging' means. 	 I can create a computer program using an algorithm I can design my own algorithm that follows a timed sequence I can debug simple programs 	Action, Algorithm, Background, Button, Event, Key pressed, Nesting, Object, Pro Sound, when clicked/swiped, Sequence Additional resources Unplugged activities- Coding and algorithms Debugging algorithms Scratch https://scratch.mit.edu Bee-bot emulator https://beebot.terrapinlogo.com Light bot https://lightbot.com/ Purple Ma 2Dos Free co	A collision Detection, Debug, Design mode, edict, Properties, Run, Scale, Scene, e, Test, Text, Timer. Possible cross curricula links English- instruction writing. PE- Giving commands, instructions and creating sequence/patterns Art- Creating art based on partner instructions sch resources Sch resources Tools
Prior Learning	Key Que	stion(s)	Future	Learning
In year 1, children will have completed units of work on: coding, Lego builders and Maze Explorers where they should have: Been introduced to block coding Understand that an 'algorithm' is a set of instructions Know how to follow instructions Created programs using sequencing and repeat	 What is an algorithm? Why are algorithms usefu What do the different ob True or false- Algorithms What is meant by debugg 	ul in coding? ject types do? follow a sequence? ging?	 In Year 3, children will revisit coding and use flowcharts, timers and de 	nd will: bugging processes.



KS1 - Year 2 – Term 2 – 2.7 Making music				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabu	ulary
To use technology purposefully to create, organise, store, manipulate and retrieve digital content	 I know that digital music is made using a computer or device I know that sounds can be changed by increasing the tempo or volume of each instrument in the piece I know that adding sounds to a tune can improve it I know the different ways that music can be used to express feelings I know how to edit digital data such as data in music composition 	 I can add sounds to a tune I can express how music can be used to show feelings I can edit digital data I can save, find and name my work. I can record and upload my own sounds 	Vocable Bpm, Composition, Digitally, Instrument, Mu Volume. Additional resources NCEE unit of work Making music Incredibox (app and website) https://www.incredibox.com/demo/ Virtual drumming Drum kits for virtual drums beats Free drummer games online (virtualdrumming.com)	sic, Sound Effects, Soundtrack, Tempo, Possible cross curricula links Music- 'use technology appropriately and have the opportunity to progress to the next level of musical excellence' NC Project link- Using Purple Mash 2Sequence to create superhero music resources
Prior Learning	Key Que	estion(s)	Future Lo	earning
In Year 1, children will have completed a unit of 'Animated Story Books' where they should have: • Added simple sound effects to their stories.	 What is meant by digita How can I change how r What is it meant by terr 	l music? ny music sounds? npo and volume?	 In Year 3, children will: Complete a unit of work on 'Anima sounds in stop animation creation. 	tion' where they will use music and



KS1 - Year 2 – Term 2b – Unit 2.5 Effective Searching					
National Curriculum Objective	Sticky Knowledge	Skills	Voca	bulary	
 To recognise common uses of information technology beyond school 	 I know that the easiest way to find information is using a search engine such as Google, Yahoo. 	 I can use a search engine such as Google to find information. I can define key 	Internet, Search, Search Engir Wide Web, website. Additional resources	e, web page, network, World Possible cross curricula links	
	 I know the terminology associated with the internet and searching: search engine, internet, World Wide Web, Web page. I know that a digital footprint is the information about a person that exists on the internet. I know the consequences of not searching online safely 	vocabulary	Chicken Clicking Youtube	Project link- Use effective searching skills to find information about their favourite superhero	
Prior Learning	Key Question(s)		Future	Learning	
 In Year 1, children will have: Learnt how to set a safe login Developed ideas about the concept of technology that we are surrounded by and its purpose. 	 How can I search the internet? What is meant by: search engine, World Wide Web, internet and web page? What is a digital footprint? What might happen if you don't search online safely? 		 In Year 4, children will revisit 'Effective Searching' and wilearn: how to use a search engine to find specific piece information how to find reliable sources how to search algorithms. That network and communication components of be found in many different devices. 		



KS1 - Year 2 – Term 3- Unit 2.3 Spreadsheets				
National Curriculum Objective	Sticky Knowledge	Skills	Vc	ocabulary
To use technology purposefully to create, organise_store_manipulate	 I know how to organise data I know how to 	 I can use copy and paste functions. I know how to add 	Backspace key, Copy and Paste, Columns, C Toolbox, Lock Tool, move cell Tool, Rows, S	Cells, Count Tool, delete key, Equals Tool, Image Speak Tool, Spreadsheet.
and retrieve digital content	name, save and find	and edit data in a	Purple Mash resources	Possible cross curricula links
	 I know how to use copying cutting and pasting shortcuts I know that spreadsheets can be used when planning shopping. I know how to make comparisons using spreadsheet graphs. 	table layout	9 × 3 = 2Calculate	Maths: <u>Purple Mash place value spreadsheet</u>
Prior Learning	Key Que	stion(s)	Futu	re Learning
In Year 1, children will have completed a unit of work on 'Spreadsheets' and should have: • Been introduced to 2calculate on Purple Mash • Learnt how to navigate a spreadsheet • Learnt how to add images • Have an understanding of vocabulary: cell, column, row.	 Why would you copy a spreadsheet? How could you use a syou are planning some Look at the graph. When the series of the series of	and paste when using a spreadsheet to help you when e shopping? nich is the most/least popular?	 In Year 3, children will learn: How to use pie charts and bar gr How to use the spin tool How to use advanced mode Data representation in 2Graph Use software to investigate data 	aphs



KS1 - Year 2 – Term 4 – Unit 2.4 Questioning				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
• To use technology purposefully to create, organise, store, manipulate and retrieve digital content	 I know that data handling tools can give more information than pictograms 	 I can organise data I can search for information I can use a data base to answer more complex questions 	Field, Database, pictogram, Question, Data, Collate, Binary Tree, Avatar, search, sort, record. Purple Mash resources	
	 pictograms I know how to find data using specific searches I know how to construct a binary tree I know that using the Search tool allows me to find information I know how to use a database to answer more complex search questions 		2Count 2Investigate 2Question	
Prior Learning	Key Que	estion(s)	Future Learning	
 In Year 1, children will have: Sorted and grouped data according to criteria. Collected and presented data in a picture format. 	 How does a pictogram show How is information organise How can a database help org 	information? d in a binary tree? anise information?	 In Year 3, children will: Use 2Calculate to collect data and produce a variety of graphs Sort and interrogate data Display and interrogate data in a graph form using 2Graph 	



KS1 - Year 2 – Term 5- Unit 2.6 Creating Pictures						
National Curriculum Objective	Sticky Knowledge	Skills	Voc	abulary		
 To use technology purposefully to create, organise, store, manipulate and retrieve digital content 	 I know how to name, save and find my work I know that a palette is a range of colours or shapes I know that a template is a model for others to copy 	 I can use 2paint a picture to create art based upon the impressionist style of art. I can recreate Pointillist art 	Impressionism, Palette, Point Template, style, Art. Additional resources NCEE unit of work- Using paint	illism, Share, Surrealism, Possible cross curricular links Art- Pointillism, impressionism and surrealism.		
	 I know that impressionist paintings were of scenes that captured a moment and gave an 'impression' of the scene. I know that impressionist artists used bold, easily- 	 I can recreate Mondrian's style using the lines template I can use the patterns template I can explore surrealism and eCollage 		Project- Art created in line with 'Mexico' project Geography- Art based on Chetumal in Mexico		
	seen brushstrokes and		Purple M	ash resources		
	 I know that pointillism was invented mainly by Seurat and Paul Signac. I know that pointillist paintings are created by using small dots in different colours. 		2Pai	nt a Picture		
Prior Learning	Key Que	estion(s)	Future	Learning		
In Year 1, children will have: Designed an avatar creation Used simple paint tools Used painting tools in '2Create' Animated images using built in effects An understanding of background images 	 What are the main features What is meant by a 'palette' What are the main features What are the main features 	of Impressionism? ? of Pointillism? of Surrealism?	In Year 4, children will: Create a stop motion Use of art tools to a	on animation using 2Animate create backgrounds and effects		



KS1 - Year 2 – Term 6- Unit 2.8 Presenting Ideas				
National Curriculum Objective	Sticky Knowledge	Skills	Voca	bulary
To use technology purposefully to create, organise, store, manipulate and retrieve digital content	 I know that an E-book is an electronic version of a 	I can create a digital mind map	Concept Map, Quiz, Presentati Fiction, Narrative, Audience.	on, Node, Animated, Non-
	printed book that can be	• I can name, save and find	Additional resources	Possible cross curricula links
	read on a computerI know that a mind-map is	my workI can add photos, text and	MS PowerPoint slides	Project: Sea VS Land- create presentation linking to
	a tool for organising and representing knowledge	sound into my digital content		project
	I know that digital content can be concented in	I can present my work to athere		English/reading: Fiction/Non
	many forms	others		liction
	I know how to name, save		Purple Ma	sh resources
	 and find my work I know how to include photos, text and sound in my creations. 		2Create a story 2Connect	2Quiz 2Publish
Prior Learning	Key Qu	estion(s)	Future	Learning
In Year 1, children should have:	What do need to think above	ut when planning a presentation?	In Year 4, children will:	
Created text and the use of illustrations	Why should I plan out my presentation?		Consider different au	udiences and genres
Created an animated picture book	What is the different betwee What do we use mind maps	en an E-book and a traditional book? 5 for?	 Understand the important of the important of the important of the import. 	from a concept map into a



Year 3



LKS2 – Year 3 – Term 1 – Unit 3.4 Touch Typing				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
 To 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 know what is meant by home, bottom and top rows I know that using specific fingers to specific keys allows you to type more quickly I know the correct typing terminology 	 I can use the home, top and bottom row keys I can sit correctly at the computer and keyboard. I can use two hands to type the letters on the keyboard 	Posture, Top row keys, home row keys, Bottom row keys, Space bar. Additional resources -Ztype ZType – Typing Game - Type to Shoot Dance mat Typing: Dance mat typing Purple Mash resources Example Complexity of the second s	
Prior Learning	Key Que	estion(s)	Future Learning	
 In Year 2, children have: Presented ideas in a variety of styles through typed text. 	 Why is it important to have good posture at the computer? Why should I type certain keys with certain fingers? 		 In Year 4, children will: Discuss the effectiveness of different written material Have opportunities to type in a variety of styles 	



LKS2 – Year 3 – Term 2- Unit 3.5 Email				
National Curriculum Objective	Sticky Knowledge	Skills		Vocabulary
 understand computer networks including the internet; how they can provide multiple services the opportunities they offer communication and collaboration Use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour; identify a range of ways to report concerns about content and contact 	 I know that an email is a method of sending electronic communication from one device to another I know how to attach files to emails I know the importance of having a secure password and not sharing it with others I know how to use communication tools respectfully and have good etiquette and what I should do if I receive an 	 I can open and respond to an email I can use online communication safely I can add an attachment to an email 	Communication, Email Formatting, Report to Save to draft. Possib English- composin (Formal/informal) Pu	I, Compose, Send, CC, Attachment, the teacher, Password, Address book, ole cross curricula links og emails to different audiences. In the teacher, Password, Address book, one cross curricula links og emails to different audiences.
	email that makes me scared			
Prior Learning	Key Ques	stion(s)	Fu	iture Learning
 n Year 2, children will have: Explored what the internet is Accessed the World Wide Web Discussed what is meant by 'digital footprint' Learnt what is meant by searching and sharing. 	 What is email? What should I do if I receive an scared? What information can I send in 	nd email that makes me upset or an email?	In Year 4, children wi Look at what Throughout Project Eve taught about how to co behave online.	ill: t is meant by 'reliable sources' volve online safety units, children are communicate and how we should

11/00



LKS2 – Year 3 – Term 3- Unit 3.6 Branching databases				
National Curriculum Objective	Sticky Knowledge	Skills	Voca	bulary
 To 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 know that a database is a collection of data I know that data is facts and statistics collected together for information I know how to sort objects using just 'yes' or 'no'. 	 I can contribute to a class database I can select an attribute to separate objects into groups I can sort objects using just yes/no questions I can create my own database I can select and save 	Branching database, Data, Data Additional resources NCEE unit of work Branching Databases	abase, Question. Project- Create a database related to 'Food around the world' topic.
		appropriate images	Purple Mas	stion
Prior Learning	Key Qu	estion(s)	Future	Learning
 In Year 2, children should have: Used 2Calculate to collect data and produced a graph Used questioning to separate and group data Enquired into different data handling tools 	 What is meant by data? What is a database? What is a branching databas 	e?	 In Year 4, children wil Use spreadsheets to Present data through 	ll: input and examine data n line graphs



LKS2 – Year 3 – Term 4- Unit 3.1 Coding					
National Curriculum Objective	Sticky Knowledge	Skills	Vocat	oulary	
 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 variable 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 know that an algorithm is a set of instructions I know how to identify an error in my program and fix it I know how to read programs with several steps and predict what I will do I understand what a flowchart is and how flowcharts are used in computer programming I know that there are different types of timers- 'timer after' means after a certain number of seconds and 'Timer every' means that the action will re-occur. I know how to use the repeat command 	 I can create an algorithm based on a real- life situation I can create a flowchart I can begin to spot errors and debug them with some independence 	Action, Algorithm, Background, A Collision Detection, Debug, Devel Object, Flowchart, Plan, Predict, C Timer, Procedure, Sequence, Sou Additional resources Unplugged activities Debugging algorithms Decomposition Light bot https://lightbot.com/ Scratch https://scratch.mit.edu Bee-bot emulator https://beebot.terrapinlogo.com	ert, Blocks of Command, Button, op, Execute, Event, Nesting, Dutput, Repeat, Properties, and, Timer, Scene, Test, Values. Possible cross curricula links DT: building a product and following written instructions. English: Explanation/instructional texts PE: Fitness coding <u>Coding PE fitness</u> <u>Coding in PE example</u>	
			Purple Mas	h resources	
			Tools	2Chart Free code chimp	
Prior Learning	Key Que	estion(s)	Future L	earning	
 In Year 2, children should have: Completed a unit of work on coding, looking at algorithms, timers, buttons and debugging. 	 Why is it useful to use a flow program? What does repeat mean in c What is the difference betw 	vchart to design a computer computer programming? een 'timer after' and 'timer every'?	In Year 4, children will r learn: To use code, test and debugging p Use IF statements Use Number variables How to identify errors and fix the	revisit coding and will processes	



National Curriculum Objective Sticky Knowledge Skills Vocabulary • To 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 know how to spreadsheet to location of a spreadsheet - e.g E5 • I know how to describe the location of a spreadsheet - e.g E5 • I know how to describe the location of a spreadsheet - e.g E5 • I know how to describe the location of a spreadsheet and create a spreadsheet and create graphs • Num You Spreadsheet - e.g E5 • I know how to describe the location of a spreadsheet and create graphs • Num You Spreadsheet - e.g E5 • I know how to input data into a spreadsheet and create graphs • Num You Spreadsheet - e.g E5 • I know how to input data into a spreadsheet and create graphs • Num You Spreadsheet - e.g E5 • Vum You		LKSZ – Year 3 – Terri Sa-	Unit 3.3 Spreadsneets	
 To 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 know that - s and e can be used to compare values I know how to describe the location of a spreadsheet e.g. E5 I know how to to input data into a spreadsheet nucle create charts and graphs I know how to to input data into a spreadsheet nucle create charts and graphs I know how to to input data into a spreadsheet nucle create charts and graphs I know how to to input data into a spreadsheet nucle create charts and graphs I know how to to input data into a spreadsheet nucle create charts and graphs I know how to to input data into a spreadsheet nucle create charts and graphs I know how to to input data into a spreadsheet nucle create charts and graphs I know how to to input data into a spreadsheet nucle create charts and graphs I know how to no input data into a spreadsheet nucle create charts and graphs I know how to no input data into a spreadsheet nucle charts and graphs I know how to no input data into a spreadsheet nucle charts and graphs I know how to no input data into a spreadsheet nucle charts and graphs I know how to no input data into a spreadsheet nucle charts and graphs I know how to no input data into a spreadsheet nucle charts and graphs I know how to input data into a spreadsheet nucle charts and graphs I know how to input data into a spreadsheet nucle charts and graphs I know how to input data into a spreadsheet nucle charts and graphs I know how to input data into a spreadsheet nucle charts and graphs I know how to input data into a spread	National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary
Prior LearningKey Question(s)Future Learningn Year 2, children have:• What is a spreadsheet?In Year 4, children will:• Completed a spreadsheet unit, focussing on copying and pasting, totalling tools, addition, tablet layout and block graphs.• When might we use a spreadsheet?• Will complete a spreadsheet unit, focused on using Formula wizard, cell formatting, timer, random number, spin buttons, budget planners and line graphs.	 To 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 know what a spreadsheet is I know that <. > and = can be used to compare values I know how spreadsheets can help us I know how to describe the location of a spreadsheet- e.g E5 I know how to input data into a spreadsheet and create graphs 	 I can use <. > and = tools to compare I can use a spreadsheet to create charts and graphs I can describe the location of a cell 	< > = , Advance mode, Copy and Paste, Columns, Cells, delete key, equals tool, Spin tool, Move cell tool, Rows, Spreadsheet. Additional resources Microsoft Excel Purple Mash resources Querta Strate
n Year 2, children have: Completed a spreadsheet unit, focussing on copying and pasting, totalling tools, addition, tablet layout and block graphs. What is a spreadsheet? What is a spreadsheet? When might we use a spreadsheet? When might	Prior Learning	Key Ques	stion(s)	Future Learning
	 Year 2, children have: Completed a spreadsheet unit, focussing on copying and pasting, totalling tools, addition, tablet layout and block graphs. 	What is a spreadsheeWhen might we use a	et? a spreadsheet?	In Year 4, children will: • Will complete a spreadsheet unit, focused on using Formula wizard, cell formatting, timer, random number, spin buttons, budget planners and line graphs.

LKS2 – Year 3 – Term 5a- Unit 3.3 Spreadsheet



LKS2 – Year 3 – Term 5b- Unit 3.8 Graphing				
National Curriculum Objective	Sticky Knowledge	Vocabulary		
 To 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 know that a graph is a diagram representing part of a set of data I know that the frame lines are called the 'x' axis and the 'y' axis I know how to solve an investigation and present the results in graphic form I know that there are different kinds of graphs such as: line graph, bar chart and pie chart. 	Graph, Field, Data, Bar chart, Block graph, Line graph, Axis, Tally chart, sorting, column, row. Additional resources Possible cross curricula links Maths- creating line graphs and bar charts. Data collection/ tally charts Purple Mash resources Vey Images Chart Title Add and remove a Reg Image Add and remove a Add and remove a Reg Image Add and remove a Reg Image Add and remove a Reg Image Add and remove a Perical Bar Chart Horizontal Bar Chart Data entry table Chart Title Add and remove a Reg Image Add Add Add Add Add Add Add Add Add Ad		
Prior Learning	Key Question(s)	Future Learning		
 n previous years, children have: Sorted data according to criteria Collected and presented data in picture format Used questioning to separate and group data Produced a graph using 2Calculate 	 What is a graph? What are the frame lines on the graph called? What different kinds of graphs are there? 	 In Year 4, children will: Input and examine data into soreadsheets Present data through line graphs 		



LKS2 – Year 3 – Term 6a- Unit 3.7 Simulation				
National Curriculum Objective	Sticky Knowledge	Skills	Vocab	oulary
 To 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 know that a simulation is a program that models a real-life situation I know some examples of simulations used for work such as: dangerous situations for training (flying); carrying out medical operations and piloting an aeroplane. I know that simulations can also be used for fun such as racing simulations I know some disadvantages of simulations such as: They can be very expensive 2. They are often too simple and unexpected problems can still occur in real life that are difficult to simulate 	 I can begin to evaluate simulations by comparing them with real situations I can recognise patterns within simulations I can use a simulation to try out different options and test predictions 	Analysis, modelling, simulation, e Additional resources Aeroplane simulator Youtube Space simulation Youtube Purple Mas Locked Use the arrows to navigate through the Simulation Exact Set Water START	evaluation, decision. Possible cross curricula links h resources Simulate
Prior Learning	Key Questi	on(s)	Future L	.earning
 In previous years, children have: Followed instructions Created simple programmes and simulation of real-life events Used algorithms and debugging 	What is a computer similarWhat kind of simulation:Are there any disadvant	ulation? s are there? ages to simulations?	In Year 4, children will:	nd debug nents in their work

LKS2 – Year 3 – Term 6b- Unit 3.9 Presenting ideas (Microsoft PowerPoint)				
National Curriculum Objective	Sticky Knowledge	Skills	Vocal	oulary
 To select, use and combine a variety of software (including internet services) on a 	 I know what PowerPoint is and understand its uses I know how to locate and open 	 I can create a PowerPoint presentation I can add media to a 	Animation, Border Properties, For Presentation, Slide, Slideshow, T Additional resources	ont Formatting, Layer, media, Text box, Transition, WordArt. Possible cross curricula links
a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including	PowerPointI know how to add new slides and change the layout	presentation		Could be taught as part of another foundation lesson and not stand alone.





Year 4



LKS2 – Year 4 – Term 1 – Unit 4.8 Hardware investigators				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
 To understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer communication and collaboration. 	 I know the name of different parts of a desktop computer including: keyboard, mouse, printer, graphics card, memory, processor, hard disk, motherboard, CPU, RAM, Hard drive, network card, monitor I know the difference between hardware and software I know the functions of the different parts of a computer. 	 I can name the different parts that make up a computer I can explain what the function of the different parts of the computer is I can create a leaflet to show the function of computer parts 	Motherboard, CPU, RAM, Graphics card, Network card, Monitor, Speakers, Keyboard and mouse. Additional resources NCEE unit of work The Internet Hardware VS Software Youtube Inside your computer Youtube Physical resources in computing cupboard (motherboard, hard drive, network card) Purple Mash resources Quiz	
Prior Learning	Key Que	estion(s)	Future Learning	
Previously, children should have learnt: To explore the internet and how devices allow connections to access functions on the World Wide Web How to use device functions via the World Wide Web	 What is the difference betwee Can you name the different pa functions? 	en hardware and software? arts of a computer and explain their	 In Year 6, children will complete a 'Networks' unit of work and learn to: Use device functions for 2-way communication via the World Wide Web. The hardware aspects of LAN and WAN. 	



LKS2 – Year 4 – Term 2 – Unit 4.4 Writing for different audiences				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
 To select, use and combine a variety of software (including internet services) on a range of digital devices to design and create content that accomplish given goals, including collecting, analysing, evaluating and presenting data. 	 I know how to change font size and style and how this affects the impact of a text. I know that changing the appearance of font can make things easier to read and highlight important parts of the text I know how to add images to my digital content 	 I can change font style and size I can create my own newspaper report I can work collaboratively to create digital content 	Font, Bold, Italic, Underline, format, genre, viewpoint, reporter, opinion, reporter, Purple Mash resources	
Prior Learning	Key Que	estion(s)	Future Learning	
 In Year 3, children focus on touch typing skills and typing fluency, They also complete a unit of work on 'Email' where they consider communication style and use email simulations. 	 How do you change the font What impact does changing 	size and style? the font have?	 In Year 6, children will look at blogging with a focus on considering communication style and impact of communication style. Children will also do a unit of work on 'Quizzing' where they will consider audience and purpose when producing a digital product. 	



LKS2 – Year 4 – Term 3 – Unit 4.1 Coding					
National Curriculum Objective	Sticky Knowledge	Skills	Vocabula	ry	
 To design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts To use sequence, selection and repetition in programs; work with variable and various forms of input and output To use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs To 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 know how to change variables in programming I know how to use coordinates in computer programming I know how to use flowcharts for design of algorithms I know how to identify errors in code I know what is meant by 'if' and 'else' statements, repetition and variables. I know what is meant by 'Design, code and debug' I know what is meant by the terms 'Decomposition' and 'Abstraction'. 	 I can turn a real-life situation into an algorithm, using a design that shows how this is done. I can use repetition I can use timers in programs I can use a number variable I can create a playable game 	Action, Alert, Background, Button, Code Bl Execute, Co-ordinates, Flowchart, If, If/Else Predict, Number variable, Prompt for Inpur until, Selection, Timer, Variable, Variable v Additional resources Unplugged activities- Coding and algorithms Unplugged activities- Decomposition Unplugged activities- Debugging algorithm Bee-bot emulator https://beebot.terrapinlogo.com Scratch https://beebot.terrapinlogo.com/ Scratch https://lightbot.com/ Purple Mash reso Tools 2Dos 2Dos	ock, Command, Debug, e, Nesting, Object types, t, Repeat, Properties, Repeat alue. Possible cross curricula links DT: building a product and following written instructions. English: Explanation/instructional texts PE: Fitness coding Coding PE fitness Coding in PE example Durces Free code gibbon	
Prior Learning	Key Que	estion(s)	Future Lear	ning	
n year 3, children completed a coding unit of work ocusing on: Flowcharts Timers Repeat tool Code, test, debug process.	 What does 'Design How can if/else st What do the term mean? 	n, code, test and debug' mean? tatements be useful in coding? as decomposition and abstraction	 In Year 5, children will revisit coding and I simulating a physical system Introducing string Text variables and concatenation 	ook at: n (connecting things together)	



LKS2 – Year 4 – Term 4- Unit 4.5 Logo				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
 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 variable and various forms -use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs of input and output 	 I know that Logo is a text-based coding language used to control an onscreen turtle to create mathematical patterns. I know how to follow simple instructions. I know how to input simple instructions in Logo by using 'PU, PD, BK, FD, LT, RT'. I know how to create Logo shapes using the repeat function. I know how to use build procedures. 	 I can follow instructions to create shapes on paper and digitally. I can use the repeat command to create shapes I can use the keyboard to type simple instructions such as: PU, PD, BK, FD, LT, RT. 	LOGO, BK, FD, RT, LT, REPEAT, SETPC, SETPS, PU, PD. Additional resources NCEE unit of work: Logo Purple Mash resources 2Logo	
Prior Learning	Key Que	stion(s)	Future Learning	
 In Year 2, children will have completed a 'Questioning' unit of work where they should have: Used logical decision processing and used forward planning to achieve a solution. In Year 3, children will have completed a coding unit of work where they should have: Become familiar with a code environment Have an understanding of logical planning of sequences Began to understand how to debug programs 	 What is logo? What do the terms 'PU, PD, BI What does the repeat function 	K, FD, LT, RT' mean? n do?	 In Year 5, children will complete a 'Coding' unit where they will: Become familiar with terms such as 'decomposition, concatenation and abstraction' Have an understanding of different variable types and how these can be used Know why organising code carefully can be useful. 	

LKS2 – Year 4 – Term 5 – Unit 4.3 Spreadsheets				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
 To 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, 	• I know that a spreadsheet represents information in a grid of rows and columns	 I can input data into a spreadsheet I can create a timestable game using timer and 	Average, Advance mode, Copy and Paste, Columns, Cells, Charts, equals tool, Formula, Formula wizard, Move cell tool, Random tool, Rows, Spin tool, Spreadsheet, Timer.	
		random number tools.	Additional resources Possible cross curricula links	



including collecting, analysing, evaluating and presenting data and information	 I know how to describe the location of a spreadsheet-e.g. E5 I know what a formula is and how to use it within a spreadsheet to convert measurements of length and distance. I know how to format cells as currency, percentage, decimal and fractions. 	 I can add a formula to cells. I can use a spreadsheet to create a simple budget. I can create and interpret a line graph. 	Microsoft Excel Maths: Data collecting; ages; heights; properties of shapes; budgeting. PSHCE: Making decisions about money using and keeping money safe. Using spreadsheets to budget and manage money. Purple Mash resources
	 I know that a spreadsheet can model a real-life problem such as budgeting. I know how to interpret lines graphs and that they are an effective way to represent data I know how to use the formula wizard to calculate averages. 		9×3 = 2Calculate
Prior Learning	Key Que	estion(s)	Future Learning
 In Year 3, children will have completed a unit on spreadsheets and should have: An understanding of what a spreadsheet is Learnt that <,> and = can be used to compare values Collected, analysed and presented data and information in a bar chart. 	 What is a spreadsheet? Give an example of the data line graph. What tools would you use to 2Calculate? In what real-life situation wo 	that could best be represented by a create a timed timestables test in uld you use a spreadsheet?	 In Year 5, children will revisit 'Spreadsheets' where they will: Use a formula within a spreadsheet to convert measurement of lengths and distance Use a spreadsheet to model a real-life problem (event planning) Use spreadsheets to calculate area and perimeter of shapes Use text variables

LKS2 – Year 4 – Term 6a – Effective searching				
National Curriculum Objective	Sticky Knowledge	Skills	Vocat	oulary
• To understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer communication and collaboration	 I know the terminology associated with the internet and searching: search engine, 	 I can look at information on a webpage and make prediction about the accuracy of the information. 	Balanced view, internet, key wo search engine,	rds, reliability, results page,
			Additional resources	Possible cross curricula links



 To use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 	 internet, Web page, results page. I know the function, features and layout of a search engine. I know that network and communication components can be found in many different devices I know what the purpose of a search engine is and its main features I know what makes a webpage credible. 	a search engine oogle to find on. NCEE unit of work- The Internet on. Project- effective search could be incorporated into research lessons about the Vikings. Purple Mash resources Purple Mash resources Question Coose Question Coose
Prior Learning	Key Question(s)	Future Learning
 n Year 2, children will have completed a unit of work on effective searching' and should have: Explored what the internet is How they can access the World Wide Web What is meant by a digital footprint How they can search and share information 	 What is a search engine? What features will I find on a webpage? On what devices can people communicate? How can you tell if a website/ online information accurate? 	As part of their future learning, children will: Complete an Online Safety (Project Evolve) unit on searching effectively, with a focus on: using search engines to search for information about other people How to find accurate and reliable information The judgements people may make based on the information they find. In Year 6, children will look at Networks where they will: Learn about the origins of the Internet and the World Wide Web The difference between LAN and WAN



LKS2 – Year 4 – Term 6b – Animation				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
Use technology purposefully to create, organise, store, manipulate and retrieve digital content	 I have a good understanding of what makes a good animated film or cartoon. 	 I can create my own flip book animation. I can add backgrounds, sound 	Animation, Background, Frame, Flipbook, Onion skinning, Stop motion, play, Sound, Video clip.	
	• I know how animations are	effects and photos to my	Additional resources	
	 created by hand. I know what is meant by 	• I can share my work to a	NCEE unit of work: <u>Animation</u>	
	'stop motion animation'.	display board.	Brush ninja	
	I know how to add		https://brush.ninja/	
	backgrounds and sounds to create a more complex		Stop motion animation APP	
	animation.		https://app.cloudstopmotion.com	
	 I know what is meant by 'animation frames' 		Wallace and Gromit- Stop motion animation	
	 I know how to use the 'Onion 		Mickey Mouse animation Youtube	
	skinning tool' and what it is		Purple Mash resources	
	used for.			
			2Animate	
Prior Learning	Key Que	estion(s)	Future Learning	
n previous years, children should have:	What is an animatio	n?	In Year 5 children will:	
Used 2Paint a Picture to show art effects and collage	• What is meant by stop motion animation?		Complete a unit of work on 'Game Creator' where they	
• Used 2Create to produce an animated story using built in effects	What is meant by or	nion skinning?	will look at 3D art, animating 3D characters and add a gaming element to animation.	
• Looked at the difference between a static background and a moving foreground				
• In coding units, children will have used sequencing to create animation effects.				



Year 5



UKS2 – Year 5 – Term 1 – Unit 5.4 Databases					
National Curriculum Objective	Sticky Knowledge	Skills	Vocal	oulary	
 To 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 know that a database is a collection of data organised in a way that it can be search and information found easily. I know what is meant by 'working collaboratively'. I know that data can be searched and sorted in a variety of different ways and can be sorted pictorially. 	 I can search for information in a database. I can contribute to a class database. I can create my own database around a chosen topic. 	Arrange, avatar, chart, collabora group, record, database report, Additional resources NCEE unit of work Data bases Purple Mae	tive, data, database, field, group, search, sort, statistics. Possible cross curricula links Links with Ancient Greece topic- database around Greek Gods/mythical creatures. sh resources Avatar builder	
Prior Learning	Key Que	estion(s)	Future I	_earning	
 In previous years, children should have: Completed a unit of work on 'Branching Databases' in Year 3 where they should have sorted and interrogated data. Completed a 'spreadsheet' unit of work in Year 2, 3 and 4 where children should have collected and presented data using a variety of graphs. 	 What is a database? What is meant by 'c How can we sort an 	ollaborative' working? d search data?	 In Year 6 children will: Complete a unit of wo answer and set questi of a database, Organise data and cre Microsoft Excel. 	rk on 'Quizzing' where they ons based on the interpretation ate graphs and charts using	



UKS2 – Year 5 – Term 2 – Unit 5.6 3D Modelling					
National Curriculum Objective	Sticky Knowledge	Skills	Voca	bulary	
 To 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 know that there are different viewpoints when designing models: 3D, net and points. I know that moving pointing can alter the shape of a model. I am beginning to understand the skills needed in Computer aided design. I know how 3D printing can be used in the real world (Architectural plans; packaging; mechanical components; clothing) 	 I can use different viewpoints when designing a model. I can design a 3D model to fit a certain criterion. I can use the 'pattern fill' tool to create my own design. 	2D, 3D, 3D printing, CAD, Desig pattern fill. Additional resources NCEE unit of work <u>3D Modelling</u> Purple Ma Purple Ma Additional comp Young enterprise topic- Creatir Christmas Fayre. Use of the inter researching prices and compilir	n brief, points, net, template, Possible cross curricula links Design and Technology- Computer aided design (Design, make and evaluate) Links with 'Young Enterprise topic'- designing packaging for sweet treats. sh resources Duting/enrichment ag sweet treats to sell at the ernet for Market research, ag data.	
Prior Learning	Key Question(s)		Future	Learning	
 In previous years, children should have: Used different design features such as: paint, collage, animated images, backgrounds and effects. 	What are the differeHow can the objectsHow is computer aid	ent views of an object available? s made be turned in 3D objects? ded design used in industry?	In Year KS3 children will: • Develop and commun annotated sketches, of computer-based tools	nicate design ideas using detailed plans, 3-D modelling and s. (NC Design and Technology)	



UKS2 – Year 5 – Term 3 – Unit 5.1 Coding				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
 To design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts To use sequence, selection and repetition in programs; work with variable and various forms of input and output To use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	 I know that a simulation is a replica of something in the real world. I know what is meant by decomposition and abstraction in computer science. I know what is meant by 'concatenation' and how it works. I am beginning to understand how to simplify code. I am beginning to understand what a function is and how they work in code. I know that there are different variable types and how these can be used in my code. I know how to create a 'string'. 	 I can create a playable game. I can select the right images to reflect my simulation. I can program a simulation. I can create a program which represents a physical system. I can use variables in my code. I can deconstruct my code into smaller manageable parts. I can create and use strings in programming to produce a range of outputs I can use functions in my code to make it more efficient 	Decomposition, abstraction, algorithm, concatenation, debug, flowchart, event, function, input, nesting, object, output, repeat, physical system, properties, sequence, selection, simplify, timer, variable. Additional resources Possible cross curricula links Light bot https://lightbot.com/ Scratch https://scratch.mit.edu Bee-bot emulator https://beebot.terrapinlogo.com https://beebot.terrapinlogo.com Coding PE fitness Coding in PE example algorithms Unplugged activities Coding and algorithms Purple Mash resources Purple Mash resources Additional computing/ enrichment Additional computing/ enrichment Winchester Science and Technology Visit Use of VR headsets Une of taloscorea and iPad apps for stargazing ovent	
Prior Learning	Key Oue	estion(s)	Future Learning	
In previous years, children should have completed numerous	What is a simulation	n?	In Year 6 children will:	
'coding' units of work (Y1, Y2, Y3 and Y4) and will have learnt:	What is meant by all	bstraction and decomposition in	Revisit coding, using functions, flowcharts, control	
 About the code, test and debug process 	computer science?	·	simulations and debugging skills.	
How to use if statements	How does concatenation work?			



 Have an understanding of number variables How to use flowcharts, timers and repeat functions. 	How many different variable types can you name?			
UKS2 – Year 5 – Term 4 – Unit 5.5 Game Creator				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
 To design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 	 I know what elements make a successful game such as: challenging and a visually stimulating environment. I can plan, design, make and evaluate my own game. I can plan, design, make and evaluate the work of others. 	Animation, image, texture, computer game, instructions, perspective, customise, interactive, instructions, evaluation, screenshot, playability.		
• To select, use and combine a variety of software	• I know that evaluating allows	 I can design characters for 	Possible cross curricula links	
(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 internet services) on a range of digital me to think about ways in levices to design and create a range of programs, ystems and content that accomplish given goals,	 I can add animation and sounds to my game. 	Design and Technology- (Design, make and evaluate) History link- design a game related to the Mayans	
including collecting, analysing, evaluating and		• I can write informative	Purple Mash resources	
presenting data and information.		instructions for my game so that other people can play it.	purple mash 2DIY3D	
Prior Learning	Key Que	estion(s)	Future Learning	
 n Year 4, children should have: Completed a unit of work on 'Animation' where they will have created a stop motion animation added sounds, backgrounds and effects. 	What elements makWhy is it important to	e a successful game? to evaluate mine and others' work?	 In Year 6 children will: Complete a unit of work on 'Text Adventures' where they will plan and create a story-based adventure. They will include full functionality including animation, background and sound effects. 	



UKS2 – Year 5 – Term 5 – Unit 5.3 Spreadsheets					
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary		
 To 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 know that a spreadsheet is made up of rows and columns. I know that a spreadsheet can model a real-life problem. I know how to use formula within a spreadsheet can convert measurements of leasth and distance. 	 I can create a formula in a spreadsheet to convert measurements. I can use the count tool to answer hypotheses about common letters in use. I can use a spreadsheet to work out the area and perimeter of a shape. 	Rows, spreadsheet, columns, data, format, formula, advance model, formula bar, formula wizard, totalling tool, variable Purple Mash resources		
	 I know how to use formula to calculate area and perimeter of shapes. 	 I can use these calculations to solve a real-life problem. I can create simple formulae that use different variables. 	2Calculate		
Prior Learning	Key Que	stion(s)	Future Learning		
In Year 4, children should have:	How can a spreadshe	eet replicate a real-life situation? What	In Year 6 children will:		
 Completed a unit on 'spreadsheets' where they will have learnt how to use: formula wizard, cell formatting, timer, random number buttons, budget planning and how to use line graphs. 	could it be used for?		 Revisit 'Spreadsheets' using Microsoft Excel. They will use them for computational models; probability using random functionality; budgeting and event planning. 		



	UKS2 – Year 5 – Term 6 -	– Unit 5.7 Concept maps	
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary
• To 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,	 I know that a concept map is a pictorial way of showing relationships between concepts and ideas. 	 I can create a basic concept map. I can create a collaborative concept map and present 	Concept, concept map, connection, collaborate, node, presentation mode, story mode. Purple Mash resources
including collecting, analysing, evaluating and presenting data and information.	 I know that a collaborative concept map allows users to contribute and share ideas. I understand the need for visual representation when generating and discussing complex ideas. I know that concept maps can be used to retell stories and information. I know what is meant by 'concept maps', 'stage', 'nodes' and 'connections. 	this to an audience.	purple mash 2Connect
Prior Learning	Key Que	estion(s)	Future Learning
 In Year 4, children should have: Completed a unit on 'writing for different audiences' where they gained an understanding of text formatting and organisation. Transferred information from a concept map into a written report. 	 What is a concept m How is information a How does a concept 	ap? arranged on a concept map? : map help share ideas?	 In Year 6 children will: Produce a blog where they will need to consider the impact of presentation and work collaboratively during the planning process.



Year 6



UKS2 – Year 6 – Term 1 – Unit 6.1 Coding					
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary		
 To design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts To use sequence, selection and repetition in programs; work with variable and various forms of input and output To use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	 I know how the launch command works. I know how to use functions to make programming more efficient. I know how to debug when a problem occurs. I know how to use flowcharts to help design each aspect of my game. I know the key elements of a successful game. I know how to use 'tabs' to organise my code. I know how user input can be used in a program. 	 I can plan a playable game. I can create a playable game with a timer and a score. I can use flowcharts to create and debug code I can create a simulation. I can use functions in my code. 	Action, algorithm, command, co-ordinates, event, decomposition, execute, debug, flowchart, function, input, launch command, object, output, predict, properties, procedure, sequence, repeat, predict, sequence, simulation, timer, variable, selection, tab. Additional resources Possible cross curricula links Light bot https://lightbot.com/ Scratch https://scratch.mit.edu Bee-bot emulator https://beebot.terrapinlogo.com Coding PE fitness Coding in PE example Unplugged activities Decomposition Unplugged activities Debugging algorithms Purple Mash resources		
			Tools 2Dos 2Chart Free code gorilla		
Prior Learning	Key Que	estion(s)	Future Learning		
n previous years, children should have completed numerous coding' units of work (Y1, Y2, Y3 and Y4). In Year 5, children vill have learnt: How to use efficient coding How to Simulate a Physical System What is meant by 'decomposition and abstraction' Introducing strings	 How does the launc What is a 'function' programming more effici What are the key ele Why might you use 	h command work in coding? and how can functions make ent? ements of a successful game? 'tabs' in your coding?	 In Year KS3 children will: Use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems. 		



	UKS2 – Year 6 – Term	2 – Unit 6.4 Blogging	
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary
 To understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer communication and collaboration. To 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 To use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour; identify a range of ways to report concerns about content and contact 	 I know what is meant by a 'blog'. I know the features of a successful blog. I know different examples of what a blog might be about. I know the ways in which an audience can be involved in a blog. I know that changing the visual properties of a blog can affect the audience. I know why it is important for blog posts to be approved (inappropriate posts and 	 I can plan the theme and content for a blog. I can contribute to an existing blog. I can create my own blog. I can change the visual properties of a blog. 	Approval, Archive, Blog, Blog post, Collaborate, Commenting, Vlog. Possible cross curricula links Blogging in English Blog related to current topic- War/Remembrance Purple Mash resources Purple Gash resources 2Blog 2Blog
Prior Learning	Key Oue	stion(s)	Future Learning
 This unit of work shares links with Project Evolve Online Safety ourriculum. (NC 7) Self-image and identity; Online relationships; Online reputation; Online bullying; Managing online information and Privacy and Security. Online Safety is taught at the beginning of every term. n previous years, children should have learnt: Effective searching- using reliable sources Email- Evaluating communications, email safety, sharing images and attachments. 	 What is a blog? What can a blog be a How are the audience Why is it important f adults? (Online Safety) What are the feature 	about? ce involved in a blog? for blog posts to be approved by es of a successful blog?	 In Year KS3 children will: Understand a range of ways to use technology safely, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns. undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users



UKS2 – Year 6 – Term 3 – Unit 6.6 Networks				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabula	ıry
 To understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer communication and collaboration. 	 I know what the internet consists of. I know the difference between the World Wide Web and the internet. I know what a LAN and a WAN are. I know how the internet is accessed in school. I know that 'Tim Berners-Lee' is the inventor of the World Wide Web. (Significant individual) 	 I can research the internet I can consider some of the major changes in technology which have taken place during my lifetime. 	Hub/switch, Internet, Local area netwo Wide Web, Router, Wide area netwo Purple Mash res Tim Berners- Lee Profile Communication Questionnaire	vork (LAN), Network, World rk (WAN), Wi-Fi, sources
Prior Learning	Key Que	estion(s)	Future Lea	rning
 n Year 4, children will have completed an Effective Searching and Hardware investigators unit of work, where they should have: An understanding of the 2-way communication technologies using algorithms that run off the hardware connections. An understanding of the hardware components that make devices functions including those for networking. 	 What is the differen Wide Web? What is the differen Who is Tim Berners- 	ce between the Internet and the World ce between a LAN and a WAN? Lee?	 In Year KS3 children will: understand the hardware a that make up computer sys communicate with one and systems. 	nd software components tems, and how they ther and with other



UKS2 – Year 6 – Term 4 – Unit 6.7 Quizzing				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
 To 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 know the different question types and how to use them e.g multiple choice, picture clues, one-word answers. I know the factors that I need to consider when creating a quiz: audience, reading ability and interests. I know the features of a quiz. Title, instructions, feedback, time limits, images. 	 I can name different quiz question types. I can plan my own quiz I can choose a suitable question type I can create a picture-based quiz for young children I can create a quiz that requires the player to search a database. 	Audience, Audio, Case-sensitive, Clone, Cloze, Preview, Quiz. Possible cross curricular links Could be used as a revision tool for SATs. Purple Mash resources Quiz Quiz QUIY Text Toolkit Text Toolkit QConnect QUIVES	
Prior Learning	Key Que	stion(s)	Future Learning	
 n Year 5, children will have completed a unit on Databases where they should have: Created and searched a database for information An understanding of the wording of questions and how these can be effectively answered by searching a database. Additionally, they will have completed a unit of 'Game Creator' where they should have: Created a game environment Wrote instructions for their own game Considered playability and challenge for audience. 	 What are the differe Sequencing, multiple cho text-based. What factors do you quiz? Apart from question contain? 	nt question types? <i>Name three.</i> ice, labelling, grouping and sorting, need to consider when creating a s, what else does a quiz need to	 In Year KS3 children will: undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability 	



UKS2 – Year 6 – Term 5 – Unit 6.5 Text adventures				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
 To design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts To use sequence, selection and repetition in programs; work with variable and various forms of input and output To use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs To 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 know what a text adventure is and can explore examples. I know why it is important to plan a text-based adventure. I know that a function is a section of code that gets run when it is called from the main code and that it is a piece of code that gets run lots of times. I know what these different icons do. 	 I can plan a story adventure. I can create a story-based adventure. I can use written plans to code a map-based adventure. I can use the functionality of 2Create to create, test and debug using my plan. I can add backgrounds and sounds to my program. 	Text-based Adventure, Debug, Sprite, Selection, function. Additional resources NCEE unit of work Text-adventures Gaming Purple Mash resources Purple Mash resources Create a Story 2Create a Story 2Connect Additional computing/ enrichment Election project- Creation of election campaigns using: PowerPoint (Adding images, backgrounds, sound effects etc.) Planning, creating and editing party videos using iPads and software. Podcasts? Jingles?	
Prior Learning	Key Oue	stion(s)	Future Learning	
 In Year 5, children will have completed units on Coding and Game creator where they should have: Become familiar with the functionality of 2code Planned and designed for a logical outcome Planned and designed their own game 	 What is a text-based Why is it important t What is a 'function'? Can you identify the 	adventure? o plan a text-based adventure? function of the icons?	 In Year KS3 children will: undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability understand several key algorithms that reflect computational thinking 	



UKS2 – Year 6 – Term 6 – Unit 6.9 Spreadsheets (Microsoft Excel)				
National Curriculum Objective	Sticky Knowledge	Skills	Vocabulary	
 To 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 know what a spreadsheet looks like and that it is made up of rows and columns I know basic formular in Excel for percentages, averages and max and min numbers I know that spreadsheets can model real-life situations I know that using the SUM function saves time as it allows you to add together the total of many cells without having to write them all out. I know how to carry out a multiplication calculation. 	 I can navigate and enter data into cells. I can create a variety of graphs in Excel. I am beginning to apply spreadsheet skills to solving problems. 	Auto fit, cell, cell reference, chart, column, computational model, data, delimiter, formula(e), graph, formula bar, horizontal axis, spreadsheet, range, row, text wrapping, vertical axis. Additional resources NCEE unit of work: <u>Spreadsheets</u> Resources	
Prior Learning	Key Que	estion(s)	Future Learning	
 Children complete a 'Spreadsheets' unit of work in Year 1, 2, 3, 4 and 5. In Year 5, children should have learnt: How to convert measures How to use the count tool How to insert basic formulae How to use a spreadsheet for event planning 	 What is a spreadshe How do you carry ou How does using the 	et and what is it used for? ut a multiplication calculation? SUM function save time?	 In Year KS3 children will: understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays] 	