Computing – Whole School Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
R/1	Finding out what technol		ooses e.g. what shall I use	le range of hardware, softw to take a photo? What shal y a game? etc	vare and apps I I use to heat my dinner? W	/hat shall I use to watch a
			As above but with	additional focus on:		
Y2	Mouse Skills		Navigating and playing educational games on Education City, Mathletics etc		Keyboard skills (for those with literacy skills) Continuation of previous skills if children can't access the keyboard yet)	
Y3	Photography and Creating Art	Exploring Purple Mash (Purple Mash Unit 1.1)	Online Safety Privacy and Security	Online Safety Copyright & Ownership	Following and creating simple instructions: (Purple Mash unit 1.4 LEGO BUILDERS)	Coding: Beebots
Y4	Word Processing	Making an animated Storybook (Purple Mash unit 1.6)	Online Safety Managing Online Information	Online Safety Health, Wellbeing and Lifestyle	Coding: Beebots	Coding: (Purple Mash unit 1.5: MAZE EXPLORERS)
Y5	Data Handling Pictograms and Simple Spreadsheets (Purple Mash Unit 1.3)	Virtual Reality and Making Videos	Online Safety Online Relationships	Online Safety Self-image and Identity	Coding: Beebots and Blue-Bots	Coding: Using Scratch Jr to creat a simple animation
Y6	Making Music (Purple Mash unit 2.7)	Presentations (Purple Mash unit 2.8)	Online Safety Online Bullying	Online Safety Online Reputation	Coding: Using Purple Mash 2code (Purple Mash unit 1.7 and/or 2.1)	Coding: Lego WeDo to make Mi the Moon Robot

NB: Some pupils may not be ready to access this content yet – for those pupils it is important they are taught basic skills first (i.e. activities

Year 3 Computing

Term/Topic	Curriculum Objectives	Skills/Knowledge	Equipment/Apps/Links
Autumn 1	EYFS Objective: Children recognise that a	Basic skills:	- iPad Camera
	range of technology is used in places such as	• I can take a photograph	- Digital Camera
Creating out/	homes and schools. They select and use	• I can use a painting app and explore the paint and brush tools	- Photo Booth (ipad App)
Creating art/	technology for particular purposes.		- Mark Up (ipad feature)
Photography		Further skills:	- Purple Mash
	KS1 Objective: use technology purposefully	• I can take a photograph and use it in an app	- Paint
	to create, organise, store, manipulate and retrieve digital content.	• I can edit a photo with simple tools	- Pretty Things
	Tetrieve digital content.		
		• I can use a paint/drawing app to create a digital image	
		• I can edit a photo (crop, filters, mark up etc)	
		 I can select and use tools to create digital imagery – controlling the pen and using the fill tool 	
Autumn 2	EYFS Objective: Children recognise that a range of technology is used in places such as	Basic skills:	Purple Mash
	homes and schools. They select and use	• I can choose an activity on Purple Mash	
Exploring Purple	technology for particular purposes.	• I can log on to Purple Mash, with some adult support if I need it.	
Mash (PM 1.1)	teelinelogy for particular parposes.		
	KS1 Objective: use technology purposefully	Further skills:	
	to create, organise, store, manipulate and	 I can name some examples of technology at school and home 	
	retrieve digital content.	• I can explore some of the tools on Purple Mash	
		• I can save my work in a safe place on Purple Mash	
		• I can open work that I saved last time on Purple Mash	
		• I can submit work to my teacher on Purple Mash	
Crawing 1	EYFS Objective: Children recognise that a	Basic skills:	
Spring 1	range of technology is used in places such as		
	homes and schools. They select and use	• I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).	
Online Safety/Digital	technology for particular purposes.	• I can describe the people I can trust and can share this with; I can explain why I can trust them.	
Literacy:		• I can use passwords for my accounts and devices.	
•	KS1: use technology safely and respectfully,		
Privacy & Security	keeping personal information private;	Further skills:	
	identify where to go for help and support	 I understand that I should ask a trusted adult before I share information about myself online 	
	when they have concerns about material on	 I can describe and explain some rules for keeping my information private 	
	the internet or other online technologies	• I can explain how to keep my passwords safe	
		• I can recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school).	
		• I can describe how online information about me could be seen by others.	
Spring 2	EYFS Objective: Children recognise that a	Basic skills:	
Spring 2	range of technology is used in places such as	• I know that work I create belongs to me.	
	homes and schools. They select and use	• I can name my work so that others know it belongs to me.	
Online Safety/Digital	technology for particular purposes.		
Literacy:		Further skills:	
, Copyright &	KS1: use technology safely and respectfully,		
	keeping personal information private;	• I can say why my work belongs to me (e.g. 'it is my idea' or 'I designed it').	
Ownership	identify where to go for help and support	• I can save my work so that others know it belongs to me (e.g. filename, name on content).	
	when they have concerns about material on	• I can explain why other people's work belongs to them	
	the internet or other online technologies	I recognise that content on the internet may belong to other people	
Summer 1	EYFS Objective: Children recognise that a range of	Basic skills:	Purple Mash computing unit 1.4
	technology is used in places such as homes and schools. They select and use technology for	• I can follow some simple (visual) instructions to complete a simple task	Lego/Duplo and instructions to
Simple Algorithms	particular purposes.	• I know that in a computer program, instructions are called 'algorithms'	make a simple Lego/Duplo model
			Purple Mash art activities
(PM 1.4 Lego	KS1: understand what algorithms are; how they	Further skills:	
Builders)	are implemented as programs on digital	• I can sequence some simple instructions correctly e.g. for a simple recipe or everyday task	Simple recipe
	devices; and that programs execute by following precise and unambiguous instructions	 I can make my own set of instructions for a simple everyday task or recipe 	Ingredients to follow simple recipe
	precise and anamoiguous instructions	 I can edit instructions to make sure they work (debug an algorithm) 	
Summer 2	EYFS Objective: Children recognise that a range of	Basic skills:	Beebots
Summer 2	technology is used in places such as homes and		
	schools. They select and use technology for	• I can tinker with a Beebot robot (play/try out)	Beebot app on ipads
Coding: Beebots	particular purposes.	• I can use simple direction language and arrow buttons on a Beebot	Beebot mats (maps, alphabet or
0		• I can follow simple visual/oral algorithms (instructions) for a familiar activity or simple journey (e.g. from classroom to toilets)	number charts for example)
	KS1: understand what algorithms are; how they	• I can input a simple sequence of commands to control a digital device with some support (e.g. remote-control car or Beebot)	Remote controlled cars
	are implemented as programs on digital	Further skills:	Beebot tunnels and props for mor
	devices; and that programs execute by following precise and unambiguous instructions	• I can create some simple instructions for a Beebot	
	I create and debug simple programs	• I can sequence steps accurately in my own instructions for a Beebot to make a specific journey	able
	use logical reasoning to predict the behaviour of	• I can debug instructions which are not working	

Year 4 Computing

Term/Topic	Curriculum Objectives	Skills/Knowledge
Autumn 1	EYFS objective: Children recognise that a	Basic skills:
	range of technology is used in places such as	 I can play on a touch screen game and use computers/ keyboards/ mouse in role play
Word Processing	homes and schools. They select and use technology for particular purposes.	I can type letters with increasing confidence using a keyboard and tablet
	KS1: use technology purposefully to create,	Further skills (very dependent on children's literacy ability):
	organise, store, manipulate and retrieve	 I can dictate words or sentences into a digital device (dependent on communication needs)
	digital content	 I can type my name on an iPad and on a computer keyboard
		• I can type simple words
		• I can use the spacebar to make a space between words
		• I can use backspace to delete words or letters
		• I can use return/enter to start a new line
		 I can use caps lock or shift to write a capital letter I can use the arrow keys to play a game
		• I can use the arrow keys to play a game
Autumn 2	EYFS objective: Children recognise that a range of technology is used in places such as	Basic skills: • I can use drawing tools to make a picture on each page
	homes and schools. They select and use	 I can add text (with adult support if I need it)
Making an Animated	technology for particular purposes.	I can save my work
Storybook	KS1: use technology purposefully to create,	
(PM 1.6)	organise, store, manipulate and retrieve	Further skills (very dependent on children's literacy ability):
	digital content	 I can use the animation effects on Purple Mash to make my pictures move
		 I can add sound effects to my pictures, with help if I need it
		• I can add a voice recording to a page
		• I can add a background to a page
		I can add imaginative features to my animated story to enhance the story
		 I can think about what the audience would enjoy I can share my story with others
Spring 1	EYFS objective: Children recognise that a	Basic skills:
Spring 1	range of technology is used in places such as	I know I can find information or resources on the internet
Online Safety/Digital	homes and schools. They select and use	I can identify devices I could use to access information on the internet
	technology for particular purposes.	
Literacy:	KS1 Objective: recognise common uses of	Further skills (very dependent on children's literacy ability):
Managing Online	information technology beyond school	• I can give simple examples of how to find information (e.g. search engine, voice activated searching).
Information	 use technology safely and respectfully, keeping personal information private; identify 	I can use simple keywords in a search engine
	where to go for help and support when they	 I can describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened.
	have concerns about material on the internet	 I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sect
	or other online technologies	 I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'
		• I can explain why some information I find online may not be true.
Spring 2	EYFS objective: Children recognise that a range of technology is used in places such as	Basic skills:
	homes and schools. They select and use	I know at least one way I can keep safe when using technology
Online Safety/Digital	technology for particular purposes.	Further skills:
Literacy:	KC1 Objectives recording to the	 I can give simple examples of some rules which keep me safe when I use technology at home or school
Health, Wellbeing and	KS1 Objective: recognise common uses of information technology beyond school	 I know why it is not always good to spend too much time using technology
Lifestyle	 use technology safely and respectfully, 	• I can explain how I can keep safe using technology outside of home or school
,	keeping personal information private; identify	
	where to go for help and support when they	
	have concerns about material on the internet or other online technologies	
	or other online technologies	
Summer 1	EYFS Objective: Children recognise that a range of	Basic skills:
Juimici I		
Summer 1	technology is used in places such as homes and schools. They select and use technology for	 I can use simple direction language and arrow buttons on a Beebot
Coding: Beebots	schools. They select and use technology for particular purposes.	 I can use simple direction language and arrow buttons on a Beebot I can follow simple visual/oral algorithms (instructions) for a familiar activity or simple journey (e.g. from classroom to toilets) I can input a simple sequence of commands to control a digital device (i.e. a Beebot)

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	Equipment/Apps/Links
	MS Word
	Notes (iPad app)
	WordQ SpeakQ
	Clicker
	Purple Mash (typing resources and word
	processing activities)
	Google search Child friendly lands and if a so dod
	Child friendly keyboards if needed Interactive whiteboard
	https://www.kidztype.com/dance-mat-typing-
	level-1-stage-1_f1117a537.html
	https://toybox.tools.bbc.co.uk/activities/id/activit
	<u>y-dance-mat-</u>
	typing/exitGameUrl/http%3A%2F%2Fwww.bbc.co
	.uk%2Fguides%2Fz3c6tfr
	Purple Mash
sections).	
	Destada
	Beebots
	Beebot app on ipads
	Beebot mats (maps, alphabet or number
	charts for example)

	KS1: understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions I create and debug simple programs I use logical reasoning to predict the behaviour of simple programs	 Further skills: I can create some simple instructions for a Beebot to make a planned journey I can sequence steps accurately in my own instructions for a Beebot to make a specific journey correctly I can debug instructions which are not working I can make precise, unambiguous instructions I can predict the outcome of an algorithm by reading it before testing it
Summer 2 Coding (PM 1.5 Maze Explorers)	EYFS Objective: Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. KS1: understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions I create and debug simple programs U use logical reasoning to predict the behaviour of simple programs	 Basic skills: I can use and understand simple directional language I can use basic arrow keys on a keyboard or screen I can follow a simple set of instructions involving directional language/arrows I can use direction language/arrow keys to create a simple algorithm Further skills: I can add a unit of measurement to a directional instruction (e.g. move left 8 squares) I can use more complex directional language/arrow keys (diagonals) to make my algorithm more efficient I can make precise, unambiguous instructions I can predict the outcome of an algorithm by reading it before testing it

Remote controlled cars
Beebot tunnels and props
Purple Mash 2Go Challenges 1-6 (follow planning
for Purple Mash computing unit 1.5)

Year 5 Computing

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Term/Topic	Curriculum Objectives	Skills/Knowledge	
Autumn 1	EYFS objective: Children recognise that	Basic skills:	Purp
	a range of technology is used in places such as homes and schools. They	I can access Purple Mash I can sort objects into two or more categories	Purp
Data Handling	select and use technology for		Purp
	particular purposes.	I can count objects/data presented on a simple bar chart or pictogram	
(Purple Mash Unit		Further skills:	
1.3)	KS1: use technology purposefully to	• I can present simple data on a pictogram	
- /	create, organise, store, manipulate	• I can collect my own data and present it on a pictogram or bar chart	
	and retrieve digital content	• I can explain what my pictogram or bar chart tells me	
		• I can sort objects and data into a range of charts and graphs including Venn Diagrams and Pie Charts	
Autumn 2	EYFS objective: Children recognise that	Basic skills:	iPad
	a range of technology is used in places	I know the difference between a photo and a video	iMo
Virtual Reality and	such as homes and schools. They	I can record a short video using an iPad or camera	
•	select and use technology for	I can watch my video back	
Creating Videos	particular purposes.		
		Further skills:	
	KS1: use technology purposefully to	 I can put two clips together and add a sound effect on iMovie 	
	create, organise, store, manipulate	• I can add a voiceover to my video	
	and retrieve digital content	• I can add titles	
		• I can add transitions between clips	
		• I can organise my video well so that it flows well for the audience	
Spring 1	EYFS objective: Children recognise that a	Basic skills:	Cam
	range of technology is used in places such as homes and schools. They select and use	 I can recognise some ways in which the internet can be used to communicate. 	Purp
Online Safety/Digital	technology for particular purposes.	 I can give examples of how I (might) use technology to communicate with people I know. 	
Literacy:			
Online relationships	KS1 Objective: recognise common uses of	Further skills:	
Omme relationships	information technology beyond school	• I can use the internet with adult support to communicate with people I know.	
	• use technology safely and respectfully, keeping personal information private;	• I can explain why it is important to be considerate and kind to people online.	
	identify where to go for help and support	• I can use the internet to communicate with people I don't know well (e.g. email a penpal in another school/ country).	
	when they have concerns about material		
	on the internet or other online		
	technologies		
Spring 2	EYFS objective: Children recognise that a	Basic skills:	MS
	range of technology is used in places such as homes and schools. They select and use	• I know that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do something that makes me feel sad, embarrassed	2em
Online Safety/Digital	technology for particular purposes.	or upset	pret
Literacy:		Further skiller	Poss
Self-image and	KS1 Objective: recognise common uses of	 Further skills: I know that I can say no/the above phrases in real life AND online 	bud
Identity	information technology beyond school	 If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak 	
lucifility	• use technology safely and respectfully, keeping personal information private;	to an adult I can trust.	
	identify where to go for help and support	 I can describe ways in which people might make themselves look different online. 	
	when they have concerns about material	 I can explain how other people's identity online can be different to their identity in real life 	
	on the internet or other online	• I can explain now other people's identity online can be different to their identity in real life	
	technologies EYFS Objective: Children recognise that a range		<u> </u>
Summer 1	of technology is used in places such as homes	Basic skills:	Blue
	and schools. They select and use technology for	• I can tinker with a Blue-bot (play with/try out/experiment to see how it works)	by iF
Coding: Blue-bots	particular purposes.	• I can use simple direction language and arrow buttons	iPad
		• I can follow simple visual/oral algorithms (instructions) for a familiar activity or simple journey	Beeb
	KS1: understand what algorithms are; how they are implemented as programs on digital	• I can input a simple sequence of commands to control a digital device (i.e. a Bluebot)	for e
	devices; and that programs execute by following	Further skills:	Rem
	precise and unambiguous instructions	 I can create some simple instructions for a Blue-bot to make a planned journey 	Beeb
	 create and debug simple programs use logical reasoning to predict the behaviour 	 I can sequence steps accurately in my own instructions on an iPad for a Blue-bot to make a specific journey correctly 	
	of simple programs	 I can debug instructions which are not working 	
		I can make precise, unambiguous instructions	
		• I can predict the outcome of an algorithm by reading it before testing it	

	Equipment/Apps/Links
	Purple Mash 2Count
	Purple Mash 2Calculate
	Purple Mash 2Graph
	iPads
	iMovie app
	Camera filters on iPad or Mash Cams on
	Purple Mash
	MS Teams meetings with other classes
embarrassed	2email on Purple Mash (children can email
	pretend characters and each other)
	Possibly speak to Frederique re. emailing
	buddy school (teacher to teacher)
w to speak	, , ,
	Blue-bots (similar to beebots but controlled
	by iPad app)
	iPads & Blue-bot app
	Beebot mats (maps, alphabet or number charts
	for example)
	Remote controlled cars
	Beebot tunnels and props

Summer 2 Coding: Scratch Jr	EYFS Objective: Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	Basic skills: • I can follow some simple (visual) algorithms to complete a simple task • I can sequence algorithm blocks on Scratch Jr to make a simple algorithm • I can test my algorithm to see if it works
	 KS1: understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs 	 Further skills: I can sequence blocks to make sure my algorithm works in the correct order I can edit characters (Sprites) and backgrounds (stage) I can use direction blocks to move my sprite I can use units of measurement to move my sprite different distances I can debug my algorithm to improve it or make it more efficient I can use repetition, add sound, messages and speech blocks to improve my Scratch project

iPads and Scratch Jr app <u>https://www.hyetteducation.com/blog/using-</u> <u>scratch-jr-to-introduce-coding-to-ks1</u> planning ideas

https://www.scratchjr.org/teach/activities (adult support and some project ideas & instructions)

big Blocks to use with whole class

Year 6 Computing

Term/Topic	Curriculum Objectives	Skills/Knowledge	
Autumn 1 Making Music (Purple Mash unit 2.7)	EYFS objective: Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. KS1: use technology purposefully to create, organise, store, manipulate and retrieve digital content	Basic skills: • I can create a sequence of sounds with percussion instruments/my hands/an app • I can access Purple Mash • I can make choices about sounds which go together Further skills: • I can record sounds and/or my voice on an iPad • I can explore different digital sounds on Purple Mash 2 Sequence • I can create a sequence of sounds on 2Sequence and play it back to myself • I can speed up and slow down a sequence of sounds • I can add multiple layers of sounds • I can change the volume of sounds • I can explain what I like/dislike about a sequence of sounds • I can create sounds to reflect different feelings • I can upload my own recorded sounds and add them to my tune	iPad voice mer Recordable mi Purple Mash 2
Autumn 2 Presentations (PM 2.8)	 EYFS objective: Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. KS1: use technology purposefully to create, organise, store, manipulate and retrieve digital content 	 I can edit and improve my tune Basic skills: I know some different ways information can be presented digitally (e.g. a mind map, an e-book, a fact file, a powerpoint etc) I can access Purple Mash Further skills: I can make a fact file on Purple Mash I can present my work so it looks appealing I can make a quiz on Purple Mash I can add relevant clip art to my work I can make a choice about how to present my work I can make a choice about how to present my work I can use Word, Powerpoint OR Publisher to make a fact file or presentation I can present my work and edit it to improve it I can present my work to my class 	Purple Mash Powerpoint Publisher Microsoft Wor
Spring 1 Online Safety/Digital Literacy: Online bullying	 EYFS objective: Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. KS1 Objective: recognise common uses of information technology beyond school use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies 	 Basic skills: I can describe ways that some people can be unkind online. Further skills: I can describe how to behave online in ways that do not upset others and can give examples. I can give examples of bullying behaviour and how it could look online. I understand how bullying can make someone feel. I can talk about how someone can/would get help about being bullied online or offline. 	Purple Mash re Project Evolve
Spring 2 Online Safety/Digital Literacy: Online reputation	EYFS objective: Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. KS1 Objective: recognise common uses of information technology beyond school • use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies	 Basic skills: I can identify ways that I can put information on the internet. Further skills: I can recognise that information can stay online and could be copied. I can describe what information I should not put online without asking a trusted adult first I can explain how information put online about me can last for a long time. I know who to talk to if I think someone has made a mistake about putting something online. 	

Apps/Links

nemos microphones (IT resource cupboard) n 2Sequence

/ord

n resources ve Resources

Summer 1	EYFS Objective: Children recognise that	Basic skills:	Purple Mash 2Cod
	a range of technology is used in places	• I can follow and create some of my own simple (visual) algorithms to complete a simple task	
Coding using 2Codo	such as homes and schools. They select	 I can sequence algorithm blocks on 2Code to make a simple algorithm 	
Coding using 2Code	and use technology for particular	• I can test my algorithm to see if it works	
Purple Mash unit	purposes.		
1.7 and/or 2.1		Further skills:	
	KS1: understand what algorithms are;	 I know that coding means writing instructions for a computer program to follow 	
	how they are implemented as	• I can tinker with and explore the different blocks on Purple Mash 2Code and know what some of them do	
	programs on digital	 I can move my character or object using directional and movement blocks on 2Code 	
	devices; and that programs execute by	 I can use the start and stop blocks to start and finish my algorithm 	
	following precise and unambiguous	 I can edit and design my own characters and backgrounds 	
	instructions	• I can use the 'when' command	
	I create and debug simple programs	• I can add a sound	
	Ise logical reasoning to predict the	• I can make two objects or characters interact	
	behaviour of simple programs	• I can use the repeat command	
		• I can add a timer to my algorithm	
		• I can debug and test my algorithm	
		• I can make different objects/characters behave in different ways	
Summer 2	EYFS Objective: Children recognise that a range	Basic skills:	Lego WeDo set
	of technology is used in places such as homes and schools. They select and use technology for	 I can follow simple algorithms to complete a simple task 	Instructions can b
Coding using Lego	particular purposes.	 I can create a model with a purpose using Lego bricks 	https://education
WeDo to make Milo		 I can use the WeDo app to create an algorithm 	science/getting-st
	KS1: understand what algorithms are; how they		science/getting-st
the Moon Robot	are implemented as programs on digital devices; and that programs execute by following	Further skills:	
	precise and unambiguous instructions	 I know that coding means writing instructions for a computer program to follow 	
	 create and debug simple programs 	• I can tinker with and explore the different blocks on Lego WeDo app and know what some of them do	
	Is use logical reasoning to predict the behaviour	 I can move my model using the WeDo app 	
	of simple programs	 I can edit and design my model for a purpose 	
		 I can use blocks on the WeDo app to complete different tasks 	
		• I can debug and test my algorithm	
		• I can make my model behave in different ways	

can be found on tshared and at cation.lego.com/en-gb/lessons/wedo-2ing-started-project-a#1-preparation