Computing

Curriculum Map 2023-2024

The national curriculum purpose of study for Computing:

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Aims:

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

Computing: School Statement of Intent:

All pupils at Fulwood and Cadley have the right to have rich, deep learning experiences that balance all the aspects of computing. With technology playing such a significant role in society today, we believe 'Computational thinking' is a skill that children must be taught if they are to be able to participate effectively and safely in this digital world and we understand that computer technology is an essential resource for supporting teaching and learning. The internet, and other digital and information technologies, open up opportunities for pupils and play an important role in their everyday lives.

Our aim is to ensure that children become digitally literate so that they are able to express themselves and develop their ideas through information and computer technology— at a level suitable for the future workplace and as active participants in a digital world.

We teach a curriculum that enables children to become effective users of technology who can:

- Understand and apply the essential principles and concepts of Computer Science, including logic, algorithms and data representation.
- Analyse problems in computational term, and have repeated practical experience of writing computer programs in order to solve such problems.
- Evaluate and apply information technology analytically to solve problems.
- Communicate ideas well by utilising appliances and devices throughout all areas of the curriculum.

		Autumn A	Project 1	Project 2	Project 3
		Project Evolve			
Class 3	Year 1	Health, well-being and lifestyle	Programming Animations in Scratch jr	Video creation Shadow puppets edu	Data handling Digital Pictograms
		Copyright and ownership Privacy and security	https://www.mrpict.com/uploads /1/8/7/2/18722690/year_1_progr amming	https://www.mrpict.com/ uploads/1/8/7/2/1872269 0/year 1 video -	https://www.mrpict.com/ uploads/1/8/7/2/1872269 0/year 1 data -
		Health, well-being and	animations in scratchjr.pdf Programming	shadow_puppets.pdf Video creation	pictogram_diagram.pdf Data handling
Class 4	Year 1/2	lifestyle Copyright and ownership Privacy and security Managing online information	Animations in Scratch jr https://www.mrpict.com/uploads /1/8/7/2/18722690/year_1_progr amming animations_in_scratchjr.pdf	Shadow puppets edu https://www.mrpict.com/ uploads/1/8/7/2/1872269 O/year 1_videoshadow_puppets.pdf	https://www.mrpict.com/ uploads/1/8/7/2/1872269 0/year 1 datapictogram_diagram.pdf
Class 5	Year 2	Health, well-being and lifestyle Copyright and ownership Privacy and security Managing online information	Simple photo shopping https://www.mrpict.com/uploads/1/ 8/7/2/18722690/year_2_photophotoshopping.pdf	My Robot Helper Scratch Jr https://www.mrpict.com/up loads/1/8/7/2/18722690/ks 1 my robot helper.pdf	Questioning Unit 2.4 Purple Mash Link to animals in science
Class 6	Year 3	Copywrite and Ownership Managing online information	Data handling https://www.mrpict.com/uploads /1/8/7/2/18722690/year_3_datastory_graphs.pdf	Programming https://www.mrpict.com/ uploads/1/8/7/2/1872269 0/ks2 animations in scra tch.pdf	Presentation https://www.mrpict.com/ uploads/1/8/7/2/1872269 0/year_3_presentation book_creator_comic.pdf

		Copywrite and	Data handling	Programming	Presentation
Class 7	Year 3 /4	Ownership Managing online information Self-image and identity	https://www.mrpict.com/uploads /1/8/7/2/18722690/year 3 data - story graphs.pdf	https://www.mrpict.com/ uploads/1/8/7/2/1872269 0/ks2_animations_in_scra tch.pdf	https://www.mrpict.com/ uploads/1/8/7/2/1872269 0/year 3 presentation - book creator comic.pdf
Class 8	Year 4	Copywrite and Ownership Self-image and identity	https://www.mrpict.com/uploads/ 1/8/7/2/18722690/year 4 data - online questionaire .pdf	Animation-KS2 (Y4) Year 5 Animation - Character Interviews (mrpict.com)	Purple Mash- Computing Coding: Unit 4.1
Class 9	Year 5	Copywrite and Ownership Self-image and identity Online relationships Online reputation	https://www.mrpict.com/ uploads/1/8/7/2/1872269 0/ks2 platform game in s cratch.pdf	https://www.mrpict .com/uploads/1/8/7 /2/18722690/year 5 - data handling - google sheets.pdf	Animation https://www.mrpict .com/uploads/1/8/7 /2/18722690/year 5 animated scene.p df
Class 10	Year 5/6	Copywrite and Ownership Self-image and identity Online relationships Online reputation Managing online information Privacy and Security	Animation Adventure-Plotagon https://www.mrpict.com/uploads/1/ 8/7/2/18722690/year 6 animationplotagon_animation.pdf	3-D lettering- Beetleblocks https://www.mrpict.com/ uploads/1/8/7/2/1872269 0/ks2_3d_lettering.pdf	Programming- Microbit Sensors https://www.mrpict.com/ uploads/1/8/7/2/1872269 O/year_6_programming micro_bit.pdf
Class 11	Year 6	Copywrite and Ownership Self-image and identity Managing online information Online reputation Privacy and security	Animation Adventure-Plotagon https://www.mrpict.com/uploads/1/ 8/7/2/18722690/year_6_animationplotagon_animation.pdf	3-D lettering- Beetleblocks https://www.mrpict.com/ uploads/1/8/7/2/1872269 0/ks2_3d_lettering.pdf	Programming- Microbit Sensors https://www.mrpict.com/ uploads/1/8/7/2/1872269 O/year 6_programming micro_bit.pdf



Computing

Curriculum Overview of Sequential Knowledge

		Project Evolve- Safe Use	Project 1	Project 2	Project 3	Cross-curricular D.A.R.E.S projects
Class 3	Year 1	NC: 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	Programming Animations in Scratch jr NC: Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and	Video creation Shadow puppets edu NC: Use technology purposefully to create, organise, store, manipulate and retrieve digital content Recognise common uses	Data handling Digital Pictograms NC: Use technology purposefully to create, organise, store, manipulate and retrieve digital content Recognise common uses	Cross-curricular D.A.R.E.S projects Photo and digital art- Robot avatars Animation- Stop motion animation
		when they have concerns about content or contact on the internet or other online technologies. Health, well-being and lifestyle • To give examples of rules to keep myself safe when using technology both in and beyond the home. Copyright and ownership	unambiguous instructions Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs Computational thinking	of information technology beyond school Video creation I know how to select images and record a voiceover. I know how to highlight and zoom into images as I record. Key vocabulary	of information technology beyond school Data handling I know how to sort images or text into two or more categories on a digital device. I know how to collect data on a topic. I know how to create a tally chart and pictogram.	Sound- podcasting Presentation- spider diagram Video creation- retelling a story

- To explain why work I create using technology belongs to me and say why.
 To save my work under
- To save my work under a suitable title / name so that others know it belongs to me (e.g. filename, name on content).
- To understand that work created by others does not belong to me even if I save a copy.

Privacy and security

- To explain that passwords are used to protect information, accounts and devices.
- To recognise more detailed examples of information that is personal to someone (e.g where someone lives and goes to school, family names).
- To explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others.

- I understand what algorithms are
- I know how to write simple algorithms
- I understand the sequence of algorithms is important
- I know how to debug simple algorithms

Key vocabulary

Algorithm, sequence, order, bug, fix, precise, Digital, program, follow, code, bugs, fix, order, ScratchJr

Search, select, rearrange, title, text, record, pause, undo, zoom, pan, highlight. I know how to record myself explaining what I have done and what it shows me.

Key vocabulary

Sort, background, data, emoji, image, edit, shape, table, resize, drag, save.

			Programming	Video creation	Data handling	Cross-curricular
		NC:	Animations in Scratch	Shadow puppets edu	Digital Pictograms	D.A.R.E.S
Class 4	Year	Recognise common uses of	jr			projects
	1 & 2	information technology			NC:	
		beyond school	NC:	NC:	Use technology	Photo and digital
		·	Understand what	Use technology	purposefully to create,	art- Robot
		Use technology safely and	algorithms are; how they	purposefully to create,	organise, store,	avatars
		respectfully, keeping	are implemented as	organise, store,	manipulate and retrieve	
		personal information	programs on digital	manipulate and retrieve	digital content	Animation- Stop
		private; identify where to go	devices; and that	digital content	-	motion
		for help and support when	programs execute by	_	Recognise common uses	animation
		they have concerns about	following precise and	Recognise common uses	of information	Sound-
		content or contact on the internet or other online	unambiguous	of information	technology beyond school	podcasting
		technologies.	instructions	technology beyond	teermology beyond sensor	poucasting
		technologies.	mstractions	school		Presentation-
			Create and debug simple			spider diagram
			programs		Data handling	op.ac. a.ag.a
		Y1	Use logical reasoning to		Data Hallullig	Video creation-
		Health, well-being and	•	Video creation	I know how to sort	retelling a story
		lifestyle	predict the behaviour of	video creation	images or text into two	
		 To give examples of 	simple programs	• I know how to select	or more categories on a	
		rules to keep myself safe		images and record a	digital device.	
		when using technology	Computational	voiceover.	I know how to collect	
		both in and beyond the	thinking	I know how to highlight	data on a topic.	
		home.		and zoom into images as I	I know how to create a	
		Copyright and	I understand what	record.	tally chart and	
		ownership	algorithms are	record.	pictogram.	
		 To explain why work I 	I know how to write	Key vocabulary	I know how to record	
		create using technology	simple algorithms	ney vocabalary	myself explaining what I	
		belongs to me and say	I understand the	Search, select, rearrange,	have done and what it	
		why.	sequence of algorithms	title, text, record, pause,	shows me.	
		• To save my work under	is important	undo, zoom, pan, highlight.		
		a suitable title / name so	I know how to debug simple algorithms	-, , , ,		
		that others know it	simple algorithms			
		belongs to me (e.g.	Wassan and salams		Key vocabulary	
			Key vocabulary			

filename, name on		Sort, background, data,	
content).	Algorithm, sequence, order,	emoji, image, edit, shape,	
• To understand that	bug, fix, precise, Digital,	table, resize, drag, save.	
work created by others	program, follow, code,		
does not belong to me	bugs, fix, order, ScratchJr		
even if I save a copy.	3., , , , , , , , , , , , , , , , , , ,		
Privacy and security			
To explain that			
passwords are used to			
protect information,			
accounts and devices.			
 To recognise more 			
detailed examples of			
information that is			
personal to someone			
(e.g where someone			
lives and goes to school,			
family names).			
- To explain why it is			
important to always ask			
a trusted adult before			
sharing any personal			
information online,			
belonging to myself or			
others.			
Y2			
Health, well-being and			
lifestyle			
 To recognise how to 			
use information			
technology responsibly.			
To recognise some of			
the choices that are			
made when using			
information technology.			
• To know how			
guidance and rules help			

me and know where to
go to for help is
concerned.
Self image and Identity
• I can give examples of
issues online that might
make someone feel sad,
worried, uncomfortable
or frightened; I can give
examples of how they
might get help. Privacy
and security
• To explain how
passwords can be used
to protect information,
accounts and devices.
• To explain and give
examples of what is
meant by 'private' and
'keeping things private'.
To describe and explain
some rules for keeping
personal information
private (e.g. creating and
protecting passwords).
To explain how some
people may have devices
in their homes
connected to the
internet and give
examples (e.g. lights,
fridges, toys, televisions).
Managing online
information • To identify
that some images are
not real/fake

			Photography	Programming	Questioning	Cross-curricular
		N.C.		-	-	D.A.R.E.S projects
		NC:	Simple photo shopping	My Robot Helper	Unit 2.4	
Class 5	Year 2	Recognise common uses				_
Siuce 5		of information technology	NC:		NC:	Presentation- animal
		beyond school	Use technology	NC:	Use technology	catchphrase quiz
		Use technology safely and	purposefully to create,	Understand what	purposefully to create,	Dunnantations
		Use technology safely and	organise, store,	algorithms are; how	organise, store,	Presentations-
		respectfully, keeping	manipulate and retrieve	they are implemented as	manipulate and retrieve	Speech bubble pictures
		personal information	digital content	programs on digital	digital content	pictures
		private; identify where to	-	devices; and that		Photography and
		go for help and support	Recognise common uses	programs execute by	Recognise common uses	digital art- Robot
		when they have concerns	of information	following precise and	of information	avatars
		about content or contact	technology beyond	unambiguous	technology beyond school	
		on the internet or other	school	instructions		Video creation-
		online technologies.	Series			Masking story time
				Create and debug simple		- ,
				programs	To learn about data handling	
			Presentations, web designs	Use logical reasoning to	tools that can give more	
			and eBook creation	predict the behaviour of	information than	
		Y2		simple programs	pictograms.To use yes/no questions	
			I know how to add voice	simple programs	to separate information. •	
		Health, well-being and	labels to an image.	Computational thinking	To construct a binary tree to	
		lifestyle		I know how to write	identify items.	
		To recognise how to	Key vocabulary	algorithms for everyday	• To use 2Question (a	
		use information		tasks	binary tree database) to	
		technology responsibly.	Upload, image, add, tag,	I know how to use logical	answer questions.	
		 To recognise some of the choices that are 	label, audio, media, copy,	reasoning to predict the	• To use a database to	
			save.	outcome of algorithms	answer more complex	
		made when using information technology.		● I understand	search questions.	
		To know how		decomposition is breaking	 To use the Search tool to 	
		guidance and rules help		objects/processes down	find information.	
		me and know where to		I know how to debug		
		go to for help is		algorithms	Key vocabulary	
		concerned.				
		Self image and Identity		Coding/programming		

- I can give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened; I can give examples of how they might get help. Privacy and security
- To explain how passwords can be used to protect information, accounts and devices.
- To explain and give examples of what is meant by 'private' and 'keeping things private'.
- To describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords).

 -To explain how some people may have devices in their homes connected to the

internet and give examples (e.g. lights, fridges, toys, televisions).

Managing online

not real/fake

information • To identify that some images are

I understand programs follow precise instructions

- I know how to create programs using different digital devices E.g. Bee Bot or ScratchJr on a tablet
- I know how to debug programs of increasing complexity ● I know how to use logical reasoning to predict the outcome of simple programs

Key vocabulary

Decomposition, debug, reason, detail, breakdown, task, Precise, logical reasoning, prediction, debug, sequence Axtion, alert, algorithm, background, button, code blocks, command, debug, execute, design.

		NC:	Data handling	Programming	Presentation	Cross-curricular D.A.R.E.S projects
Class	Vaar	Use technology safely,		Animations in Scratch	NC:	D.A.N.L.3 projects
Class	Year	respectfully and	NC:		Select, use and combine a	Video creation-
5	3	responsibly; recognise		NC:	variety of software	voiceover film
		acceptable/unacceptable	Select, use and combine	Design, write and debug	(including internet	
		behaviour; identify a	a variety of software	programs that	services) on a range of	Computer networks
		range of ways to report	(including internet	accomplish specific	digital devices to design	Network explorer
		concerns about	services) on a range of	goals, including	and create a range of	
		content and contact.	digital devices to design	controlling	programs, systems and	Sound- podcasting
		Use search technologies	and create a range of	or simulating physical	content that	Digital art- digital se
		effectively, appreciate	programs, systems and	systems; solve problems	accomplish given goals,	portraits
		how results are selected	content that	by decomposing them	including collecting,	portraits
		and ranked,	accomplish given goals,	into smaller	analysing, evaluating and	Animation- Line draw
		· ·	including collecting,	parts	presenting data	animation
		and be discerning in	analysing, evaluating	Use sequence, selection,	and information	
		evaluating digital content	and presenting data	and repetition in	ana mjormation	Presentation- Paper
			and information	programs; work with	Interactive comics	based app prototype
		Copywrite and Ownership		variables and various	interactive connes	
		Copywrite and Ownership	Story graphs	forms of input and	Word processing/Typing	
		To explain why copying	, 5 .	output	11 c. a. p. c.c.ss	
		someone else's work from	Data handling	Use logical reasoning to	I know how to edit the style	
		the internet without	-	explain how some	and effect of my text and	
		permission isn't fair and can	I know how to create my	•	images to make my	
		explain what problems this	own sorting diagram and	simple algorithms work	document more engaging	
		might cause. Managing	complete a data handling	and to detect and	and eye-catching. For	
		online information	activity with it using images	correct errors in	example, borders and	
		 To know how to use key 	and text.	algorithms and	shadows.	
		phrases in search engines to	 I know how to create a 	programs		
		gather accurate information	feelings chart exploring a			
		online.	story or character's		Presentation, web designs	
		 To explain what 	feelings.	Computational thinking	and eBook creation	
		autocomplete is and how to		III b. t		
		choose the best suggestion.	I know how to create and	I know how to create	I know how to create an	
		 To explain the difference 	publish my own online	algorithms for my	interactive comic with	
		between a 'belief', an	questionnaire and analyse the results.	programming projects		

'opinion' and a 'fact. and		I know how to	sounds, formatted text and	
give examples of how and		decompose projects (such	video	
where they might be shared	Key vocabulary	as an animation) into steps		
online, e.g. in videos,		to create an algorithm	Key vocabulary	
memes, posts, news stories	Graph, axis, line, shape,	 I understand abstraction 		
etc.	background, upload,	is focusing on important	Project, template, layout,	
	record, label, pen tool.	information	multimedia, format, import,	
		I know how to identify	media, background, audio	
		patterns in an algorithm	recording,	
		7	, , , , , , , , , , , , , , , , , , ,	
		Coding/Programming		
		I know how to design a		
		program		
		I know how to create a		
		program using a design		
		• I know how to create a		
		sequence of code		
		I know how to evaluate		
		my program		
		my program		
		Key vocabulary		
		Abstraction, information,		
		relevant, pattern, same,		
		different, complex,		
		sequence, code, design,		
		programming language,		
		Scratch		

		Y3	Data handling	Programming	Presentation	Cross-curricular
		NC:		Animations in Scratch	Interactive comics	D.A.R.E.S projects
		Use technology safely,	NC:			Video creation-
Class	Year	respectfully and	Select, use and combine	NC:	NC:	voiceover film
7	3 & 4	responsibly; recognise	a variety of software	Design, write and debug	Select, use and combine a	
-	0 0, .	acceptable/unacceptable	(including internet	programs that	variety of software	Computer networks-
		behaviour; identify a	services) on a range of	accomplish specific	(including internet	Network explorer
		range of ways to report	digital devices to design	goals, including	services) on a range of	
		concerns about	and create a range of	controlling	digital devices to design	Sound- podcasting
		content and contact.	programs, systems and	or simulating physical	and create a range of	D: :: 1
		Understand computer	content that	systems; solve problems	programs, systems and	Digital art- digital self
		networks including the	accomplish given goals,	by decomposing them	content that	portraits
		internet; how they can	including collecting,	into smaller	accomplish given goals,	Animation- Line draw
		provide multiple	analysing, evaluating	parts	including collecting,	animation
		services, such as the	and presenting data	Use sequence, selection,	analysing, evaluating and	
		world wide web; and the	and information	and repetition in	presenting data	Presentation- paper
			Story graphs	programs; work with	and information	based app prototype
		opportunities they offer	Story graphs	variables and various		
		for	Data handling	forms of input and	Word processing/Typing	
		communication and		output		
		collaboration	I know how to create my	Use logical reasoning to	I know how to edit the style	
		Use search technologies	own sorting diagram and	explain how some	and effect of my text and	
		effectively, appreciate	complete a data handling	simple algorithms work	images to make my	
		how results are selected	activity with it using images	and to detect and	document more engaging	
		and ranked,	and text.	correct errors in	and eye-catching. For	
		and be discerning in	 I know how to create a 		example, borders and	
		evaluating digital content	feelings chart exploring a	algorithms and	shadows.	
			story or character's	programs		
			feelings.	Camputational thinking		
		Copywrite and Ownership		Computational thinking	Presentation, web designs	
		To explain why copying	I know how to create and	I know how to create	and eBook creation	
		someone else's work from	publish my own online	algorithms for my	I know how to create an	
		the internet without	questionnaire and analyse the results.	programming projects	interactive comic with	
		permission isn't fair and can	the results.	• I know how to	sounds, formatted text and	
		explain what problems this		decompose projects (such	video	

might cause. Managing online information

- To know how to use key phrases in search engines to gather accurate information online.
- To explain what autocomplete is and how to choose the best suggestion.
- To explain the difference between a 'belief', an 'opinion' and a 'fact. and give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc

Y4

Copy write and Ownership

- When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.
- I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images.
 Self Image and Identity
 To explain how my online
- To explain how my online identity can be different to my offline identity.
 To describe positive ways for someone to interact with

Key vocabulary

Graph, axis, line, shape, background, upload, record, label, pen tool.

as an animation) into steps to create an algorithm

- I understand abstraction is focusing on important information
- I know how to identify patterns in an algorithm

Coding/Programming

I know how to design a program

- I know how to create a program using a design
- I know how to create a sequence of code
- I know how to evaluate my program

Key vocabulary

Abstraction, information, relevant, pattern, same, different, complex, sequence, code, design, programming language, Scratch

Key vocabulary

Project, template, layout, multimedia, format, import, media, background, audio recording,

		others online and understand how this will positively impact on how others perceive them. • To explain that others online can pretend to be someone else, including my friends, and suggest reasons why they might do this.				
Class 8	Year 4	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	N.C: 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 Online questionnaire Word processing/Typing I know how to confidently and regularly use text shortcuts such as cut, copy	Animate Anything Animation NC: Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 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	Programming Purple Mash-unit 4.1 NC: Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Use logical reasoning to explain how some simple algorithms work and to detect and	Cross-curricular D.A.R.E.S projects Animation- line draw animation Presentation- interactive quiz eBook Sound- movie soundtrack

Copy write and Ownership

- When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.
- I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images. Self Image and Identity
- To explain how my online identity can be different to my offline identity. To describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.
- To explain that others online can pretend to be someone else, including my friends, and suggest reasons why they might do this.

and paste and delete to organise text

Data handling

• I know how to create and publish my own online questionnaire and analyse the results.

Key vocabulary

Cut, copy, paste, online, questionnaire, formatting, multiple choice, checkbox, share.

and information

I know how to take multiple animations of a character I have created and edit them together for a longer video. • I know how to record animations of different characters and edit them together to create an interview.

Video creation

I know how to evaluate and improve the best video tools to best explain my understanding.

Key vocabulary

Import, export, trim, clips, media library, subtitles, timeline

correct errors in algorithms and programs

Key learning

To begin to understand selection in computer programming.

- To understand how an IF statement works.
- To understand how to use coordinates in computer programming.
- To understand the 'repeat until' command.
- To understand how an IF/ELSE statement works.
- To understand what a variable is in programming.
- To use a number variable.

Key vocabulary

Action, alert, algorithm, background, button, code blocks, command, debug, design, execute

			Programming	Data handling	Animation	Cross-curricular
		Use technology safely,				D.A.R.E.S projects
		respectfully and responsibly;	Yr5 Scratch Platform Game		NC:	
Class	Year 5	recognise		NC:	Use search technologies	Animatin- Character
9		acceptable/unacceptable	NC:	Select, use and combine	effectively, appreciate	interviews
		behaviour; identify a range	Design, write and debug	a variety of software	how results are selected	
		of ways to report concerns	programs that	(including internet	and ranked,	Computer Networks-
		about	accomplish specific	services) on a range of	and be discerning in	Search Engines
		content and contact.	goals, including	digital devices to design	evaluating digital content	Video Creation-
		Understand computer	controlling	and create a range of	Select, use and combine a	Greenscreen News
		networks including the	or simulating physical	programs, systems and	variety of software	Report
		internet; how they can	systems; solve problems	content that		
		provide multiple	by decomposing them		(including internet	
		services, such as the world	into smaller	accomplish given goals,	services) on a range of	
		wide web; and the	parts	including collecting,	digital devices to design	
		opportunities they offer for	Use sequence, selection,	analysing, evaluating	and create a range of	
		communication and		and presenting data	programs, systems and	
		collaboration	and repetition in	and information	content that	
		Use search technologies	programs; work with	Google Sheets	accomplish given goals,	
		effectively, appreciate how	variables and various	Data handling	including collecting,	
		results are selected and	forms of input and	Data handling	analysing, evaluating and	
		ranked,	output	I can use simple formulae to	presenting data	
		and be discerning in	Use logical reasoning to	solve calculations including	and information	
		evaluating digital content	explain how some simple	=sum	Digital Animated Scenes	
			algorithms work and to			
			detect and	I can edit and format	Animation	
			correct errors in	difference cells in a		
		Copy write and Ownership	algorithms and	spreadsheet.	I know how to effectively use	
		To assess and justify when	programs	Key vocabulary	animation tools in presenting software to create animations.	
		it is acceptable to use the	programs	key vocabulary	software to create animations.	
		work of others.		Spreadsheet, cell, row,	Presentation, web design and	
		To give examples of	Computational Thinking	column, formula, sum, data,	eBook creation	
		content that is permitted to	,	value, calculation		
		be reused and know how this	I know how to use logical		I know how to create and	
		content can be found online	reasoning to explain how a		export an interactive	
			variety of algorithms work		presentation including a variety	
		Self image and Identity	, -		of media, animations,	
					transitions and other effects	

- To explain how identity online can be copied, modified or altered.
- To know how to make responsible choices about having an online identity, depending on context.

Online relationships

- To describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups). Online reputation
- To describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect.

 I know how to evaluate the effectiveness of algorithms

Coding/Programming

I know how to create programs by decomposing them into smaller parts

- I know how to use a variety of selection commands in programs
- I know how to use conditions in repetition commands I know how to work with variables
- I know how to create programs that control or simulate physical systems
- I know how to evaluate my work and identify error

Key vocabulary

Evaluation, effectiveness, complexity, data, prediction, condition, data, memory, variables, value, initialisation, control, simulate, physical system

Photography and Digital Art

I know how to manipulate shapes to create digital art.

Online reputation

I can explain the ways in which anyone can develop a positive online reputation.

Key vocabulary

Animate, slide layout, slide show, transitions, embed, publish, instant alpha,

Class	Year	Use technology safely,	App	3-D Letters- Beetleblocks	Programming- Microbit	Cross-curricular
10	5 & 6	respectfully and responsibly;	Prototype	_	Sensors	D.A.R.E.S projects
		recognise		NC:		
		acceptable/unacceptable	NC:	Design, write and debug	NC:	NC objective
		behaviour; identify a range	Use search technologies	programs that	Design, write and debug	
		of ways to report concerns	effectively, appreciate	accomplish specific	programs that	② select, use and
		about	how results are selected	goals, including	accomplish specific goals,	combine a variety of
		content and contact.	and ranked,	controlling	including controlling	software (including
		Understand computer networks including the	and be discerning in	or simulating physical	or simulating physical	internet services) on a range of
		internet; how they can	evaluating digital	systems; solve problems	systems; solve problems	digital devices to
		provide multiple	content	by decomposing them	by decomposing them	design and create a
		services, such as the world	Select, use and combine	into smaller	into smaller	range of programs,
		wide web; and the	a variety of software	parts	parts	systems and content
		opportunities they offer for	(including internet	Use sequence, selection,	Use sequence, selection,	that
		communication and	services) on a range of	and repetition in	and repetition in	accomplish given
		collaboration	digital devices to design	programs; work with	programs; work with	goals, including
		Use search technologies	and create a range of	variables and various	variables and various	collecting, analysing,
		effectively, appreciate how	programs, systems and	forms of input and	forms of input and output	evaluating and
		results are selected and	content that	output	Use logical reasoning to	presenting data
		ranked,	accomplish given goals,	Use logical reasoning to	explain how some simple	and information
		and be discerning in	including collecting,	explain how some	algorithms work and to	
		evaluating digital content	analysing, evaluating	simple algorithms work	detect and	Sound- Four Chord
			and presenting data	and to detect and	correct errors in	Remix
			and information		algorithms and programs	Automatica Character
			Word processing/Typing	correct errors in	algoritimis and programs	Animation- Character
		Cany write and Ownership	word processing/ryping	algorithms and	Computational Thinking	Interviews
		Copy write and Ownership To assess and justify when	I know how to confidently	programs	compatational rinking	Computer Networks-
		it is acceptable to use the	choose the best application		I can decompose a design or	Search Engines
		work of others.	to demonstrate my		code to focus on specific	Search Linginies
		To give examples of	learning.	Computational Thinking	parts	Data Handling-
		content that is permitted to	• I know how to format text	I know how to decompose	·	Google Sheets
		be reused and know how this	to suit a purpose.	a design or code to focus	 I can critically evaluate my 	
		content can be found online	 I know how to publish my 	on specific parts	work and suggest	
			documents online regularly	I know how to use	improvements	
		Self image and Identity	and discuss the audience	abstraction to hide		
			and purpose of my content	323.33.33.33		

- To explain how identity online can be copied, modified or altered.
- To know how to make responsible choices about having an online identity, depending on context.

Online relationships

- To describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups). Online reputation
- To describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect.

Y6 Copy write and Ownership

- To use of search tools to find and access online content which can be reused by others.
- To know how to make references to and acknowledge sources I have used from the internet.

Presentations, Web Design and eBook Creation

I know how to design an app prototype that links multimedia pages together with hyperlinks.

• I know how to choose applications to communicate to a specific audience. • I know how to evaluate my own content and consider ways to improve.

Photography and Digital Art

I know how to edit a picture to remove items, add backgrounds, merge 2 photos

Key vocabulary

Prototype, transition, animation, layout, duplicate, navigation, homepage, instant alpha, complexity in my design or code

- I know how to recognise and make use of patterns in my design and code
- I know how to critically evaluate my work and suggest improvements

Coding/Programming

I know how to identify the need for, and work with, variables

• I know how to create procedures to hide complexity in programs

Key vocabulary

Evaluation, effectiveness, complexity, data, prediction, data, memory, value, initialisation,

Coding/Programming

- -I can identify the need for, and work with, variables
- I can use a range of sequence, selection and repetition commands to implement my design

Key vocabulary

Micro:bit, program, code, algorithm, problem, sensor, temperature, light, input, output

Self image and Identity		
,		
 To identify and critically 		
evaluate online content		
relating to gender, race,		
religion, disability, culture		
and other groups, and		
explain why it is important to		
challenge and reject		
inappropriate		
representations online.		
Managing online information		
To describe how things		
shared privately online can		
have unintended		
consequences for others.		
e.g. screen-grabs.		
To explain that taking or		
sharing inappropriate images		
of someone (e.g.		
embarrassing images), even		
if they say it is okay, may		
have an impact for the		
sharer and others; and who		
can help if someone is		
worried about this. Online		
reputation		
 To explain strategies 		
anyone can use to protect		
their 'digital personality' and		
online reputation, including		
degrees of anonymity.		
Privacy and Security		
 To describe how and why 		
people should keep their		
software and apps up to		
date, e.g. auto updates.		
, S '		

Class 11	Year 6	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in	Year 6 Presentation- App Prototype NC: Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in	3-D Letters- Beetleblocks NC: Design, write and debug programs that accomplish specific goals, including controlling or simulating physical	Programming- Microbit Sensors NC: Design, write and debug programs that accomplish specific goals, including controlling or simulating physical	Cross-curricular D.A.R.E.S projects NC objective Select, use and combine a variety of software (including internet services) or 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
			evaluating digital content 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,	systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Use logical reasoning to explain how some	systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Use logical reasoning to	
		evaluating digital content Copy write and Ownership	analysing, evaluating and presenting data and information Use technology safely, respectfully and	simple algorithms work and to detect and correct errors in algorithms and programs	detect and correct errors in algorithms and programs Understand computer networks including the	Podcasting AR & VR Animation
		 To use of search tools to find and access online content which can be reused by others. To know how to make references to and 	respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the	internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer	Artificial Intelligence

acknowledge sources I have used from the internet.

Self-image and Identity

- To identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online.

 Managing online information
- To describe how things shared privately online can have unintended consequences for others. e.g. screen-grabs.
- To explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this. Online reputation
- To explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity.
 Privacy and Security
 To describe how and why

people should keep their

Word processing/Typing

I know how to confidently choose the best application to demonstrate my learning.

- I know how to format text to suit a purpose.
- I know how to publish my documents online regularly and discuss the audience and purpose of my content

Presentations, Web Design and eBook Creation

I know how to design an app prototype that links multimedia pages together with hyperlinks.

• I know how to choose applications to communicate to a specific audience. • I know how to evaluate my own content and consider ways to improve.

Photography and Digital Art

I know how to edit a picture to remove items, add backgrounds, merge 2 photos

Key vocabulary

opportunities they offer for communication and collaboration

Computational Thinking

I know how to decompose a design or code to focus on specific parts

- I know how to use abstraction to hide complexity in my design or code
- I know how to recognise and make use of patterns in my design and code
- I know how to critically evaluate my work and suggest improvements

Coding/Programming

I know how to identify the need for, and work with, variables

• I know how to create procedures to hide complexity in programs

Key vocabulary

Evaluation, effectiveness, complexity, data, prediction, data, memory, value, initialisation,

communication and collaboration

Computational Thinking

I can decompose a design or code to focus on specific parts

• I can critically evaluate my work and suggest improvements

Coding/Programming

- I can identify the need for, and work with, variables
- I can use a range of sequence, selection and repetition commands to implement my design

Key vocabulary

Micro:bit, program, code, algorithm, problem, sensor, temperature, light, input, output

software and apps up to date, e.g. auto updates.	Prototype, transition, animation, layout, duplicate, navigation, homepage, instant alpha,		