YEAR 1 Overview		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computer Science Progression descriptors • Understand what algorithms are • Create simple programs	Programming Algorithms, Sequencing, Beebots/ Roamers	Algorithms and the use of directional instructions on physical devices Remote Control cars and Beebots - make them move place to place on simple routes – link to topic, which buttons move forward, backwards, right, left They use non-standard units and can make simple corrections to their instructions. Supportive – as first experience of directional arrows – ask to work in pairs/teams and support each other Apps to teach Programming Kodable/Bee Bot – Sequencing Instructions (Weeks 1-2)	Know how to program a robot to follow simple sequence of instructions (1- 2 turns) Make simple sets of instructions (Weeks 1-2)	Plan a beebot journey - around a simple route - eg Make routes around local landmarks - a map of our locality. Travel from country to country on a map of the UK (Weeks 1-2)	Use simple algorithms eg sequence a nursery rhyme (pictures) Put the seasons in the correct order. Plants growth – put photos in order (Weeks 1-2)	Use Google maps - find their homes and look at how they get to school. Use Bee bots to follow their route LA/MA – Introduce Right left HA Record instruction using arrow cards LA — Forwards, backwards and left and right HA Bee Bots – Be a tour guide- drive your bus on a local route (Weeks 1-2)	Be able to make simple predications about an algorithm and a program The Bee Bot will go Be able to change (debug) the program to improve the route Bee Bot - Correct the program so they are able to debug their instructions when the turtle does not reach the intended destination Bee bot app — level 1change (debug) the program to improve the route Forgiving - prepared to accept making mistakes (Weeks 1-2)

Progression descriptors • Use technology safely and respectfully and keeping personal information private	Digital Literacy & Citizenship (Research) SWGFL scheme of work/Common Sense Media Online Communication and E-Safety, DLG, Blogging, E- mail)	Going Places Safely Know that they should always ask an adult before using the Internet http://www.childnet.co m/resources/smartie- the-penguin Nurturing – make aware that they should always protect themselves on the internet (Week 3)	Know what to do if they are unsure of something they see whilst using the Internet Internet Traffic Light – Common Sense Media https://www.commonsense.org/education/digital-citizenship/lesson/internet-traffic-light Respectful – recognise that some internet content is not respectful to others (Week 3)	Think U Know – https://www.thinkukno w.co.uk/professionals/r esources/jessie-and- friends/ Episode 1 Watching videos Episode2 - Sharing pictures - video / animation / story book and song (Week 3)	Lee and Kim – CEOP https://www.thinkuknow. co.uk/professionals/resou rces/lee-and-kim/ (Week 3)	With support from an adult be able to find information on the internet Searching Pupils search for pictures online by clicking on letters of the alphabet. They learn that directory sites with alphabetical listings offer one way to find things on the Internet Researching ladybirds / Minibeasts Swiggle – safe search engine Ask Jeeves for Kids How technology makes you feel – Common Sense Media https://www.commonsense.org/educatio n/digital-citizenship/lesson/how- technology-makes-you-feel Explore websites and to say whether they like them or not and why Caring – pay close attention to others opinions
Progression descriptors	Communicatio n Publishing and collaborating (Multimedia Word Processing)	Be able to log onto a computer or use a QR code to evidence work Learn to log in to a computer – practice writing names in a basic word processor eg Textease Studio, Powerpoint (used as a word processor), Pages, Using J2E Write - https://www.j2e.com/jit5# (Week 3)	To improve keyboard / typing skills improve keyboard / typing skills http://primarygame sarena.com/Play/Ke yboard-2030 https://www.topma rks.co.uk/Christmas /ChristmasGames.a spx Forgiving – practise makes perfect and to not give up on yourself	Be able to navigate around the screen with a mouse https://www.topmarks.co.uk/Christmas/ChristmasGames.aspx - mouse skills Millies Mouse Skills - Early keyboard skills - free software (Week 3)	Know how to type text using space bar for separate words to create something meaningful Create a simple slide presentation in keynote / powerpoint - add text and a picture Inclusive - discuss all their learnt processing skills and how they have combined to create their slide presentation Keyboard Skills http://primarygamesaren	(Week 3)

Use technology		(Week 3)	<u>a.com/Play/Keyboard-</u>	
purposefully to create and			<u>2030</u>	
manipulate digital				
content			(Week 3)	
		Be able to independently find and use	Make a simple animation	School Visit
		an app on a tablet for instance to take a	Use Puppet pals to create retell fairy story	Take video footage / photos - playback to
		and view a photograph	appet paid to disact retain raily story	support writing
		and their a photograph	(Week 4)	Use footage from school visit and photos
			(Week 4)	- write recount. (Word)
	Digital video	Video a message for Santa, tell everyone		write recours. (word)
	Video &			Inclusive – try to capture everyone's
	Animation	about yourself, your favourite story		
	Music / Sound	Teacher Morfo for message back from Santa		experiences
				,,, , , , , , , , , , , , , , , , , ,
		Respectful – appreciate and celebrate each		(Week 4-5)
		other's stories		
		(Week 4-5)		
		Create a simple digital painting	Be able to independently find and use an app	
			on a tablet for instance to take and view a	
		(Week 6)	photograph	
			Photo walk of the local area - Photo walk	
	_Digital		England - where are we on a map – google Earth	
	Imagery			
	(Graphics & digital cameras)		Add pictures to Pic Collage app	
	digital Callieras)			
			Supportive – encourage all to be independent in	
			their activity but to also support one another	
			, 11	
			(Week 5-6)	
				https://www.j2e.com/jit5#pictogram
	Handling			How did you get to school today?
	Information			
	(Database)			https://primaryschoolict.com/pictograph#
	,			
				(Week 6)
				\ -

YEAR 2 Overview		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Progression descriptors • 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 • Recognise common uses of information technology beyond school	Programming Algorithms, Sequencing, Beebots / Roamers/ Probots	Beebots – using floor maps – LA - Moving Beebots – fd / bk MA /HA Moving Beebots – rt / lt –pictures of toys (Week 1-2)	Understand that algorithms are implemented as programs on digital devices Using Beebots – rt / It – move from animal to animal HA Make some simple sets of instructions - to get around a route - eg follow an animal trail Challenge Make sets of instructions using cards Predict and debug Nurturing – as first experience of creating simple instructions - ask to work in pairs/teams and support each other (Week 1-2)	Understand that algorithms are implemented as programs on digital devices— use of programming ipad LA - Kodable / Beebot App / Daisy the Dinosaur—sequencing and instructions MA / HA Alex / Scratch Jun / Blue bot app (Week 1-2)	All move to using Probots - look at programming language LA - introduce to Probot simple movements - e.g. railway routes MA / HA - How would you get from - Barnard Castle to Durham city - move Probot round a map of the Uk (cities) Challenge Make sets of instructions using cards Predict and debug BeeBot / Kodable App - program an onscreen app to complete a set task and debug their instructions when the turtle does not reach the intended destination. Learn about some of the uses of the internet. Respectful - appreciate the many various uses of the internet and how important it is to the world today (Week 1-2)	Know how to program a robot to achieve set goal (sequence of 6-7 instructions: maze, point collecting) MA / HA Use of Probot for more complex instructions, programs and routes – e.g Local Area Challenge - Make routes using precise instructions – did it reach the right place? Honest – encouraging the pupils to use precise instructions Using a probot – HA Use more complex routes using ½ turns. Use mathematical language eg right angle if ready Begin to use block	Use logical reasoning to predict the behaviour of simple programs — use of any theme e.g. seaside - predict sets of instructions — did it reach the correct place? If not debug. Challenge Probot — angles rt angles / ½ turns Programming instructions to make things happen eg — make a square. Can you make a hexagon? Bee Bot / Blue Bot Use increasingly complex routes (using standard units to navigate) and debug their instructions when the turtle does not reach the intended destination eg map of UK / Europe / World on the floor. Can you drive from London to Newcastle? Be able to debug more complex problems e.g. a route on a Bee Bot / Blue

simple program. Scratch Junior Travel Planning Creating an algorithm and changing it into code http://code it.co.uk/scratchjrt avelling Extension: Use simple Logo, Scratch or Turtle to navigate around screen (Week 1-2)	Bot / Probot /Alex / Logo etc Alex - sequencing and debugging harder problems (L10 plus) Scratch Junior Dance Planning http://code-it.co.uk/scratchjrdance Extension: Create a 3D environment using Kodu that they can create and describe e.g. link this to a story such as an island adventure Forgiving - prepared to accept making (Week 1-2)mistakes
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Digital Literacy

Progression descriptors

• use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content on the internet or other online technologies

Know devices that enable direct communication between people through images and text.

We the Digital Citizens – Common Sense Media

https://www.commonse nse.org/education/digit alcitizenship/lesson/wethe-digital-citizens

Chicken Clicking (**Book**) – not available in electronic format Could be downloaded in I books and projected onto whiteboard

(Week 3)

Digital

Literacy &

Citizenship

(Research)

SWGFL scheme of

work/Common

Sense Media

Online

Communication

and E-Safety,

DLG, Blogging, E-

mail)

Jessie and Friends Think U Know – Episode 3 Playing Games https://www.thinku know.co.uk/professi onals/resources/jes sie-and-friends/

<u>Keeping it</u> <u>private</u>

https://www.comm onsense.org/educat ion/lesson/keep-itprivate-k-2

Respectful – consider and appreciate the importance of keeping personal details private

(Week 3)

Know what personal information is and that they should never share this with anyone they don't know.

That's Private — Common Sense Media

https://www.commo nsense.org/education /digitalcitizenship/lesson/tha ts-private

Digital Trails Common Sense Media

https://www.comm onsense.org/educati on/digitalcitizenship/lesson/dig ital-trails

CEOP - <u>Hector's</u> World

https://www.thinkuk now.co.uk/5_7/hecto rsworld/

Honest –
encouraging pupils to
use the internet
safely by not sharing
their personal
information or
anyone else's over
the internet

(Week 3)

Know that they should tell a trusted adult if they are upset or worried about anything on a device.

Digi Duck -

http://www.kidsm art.org.uk/teacher s/ks1/sourcesduck /projet/digiduckebook.pdf

Putting a stop to online meanness – Common Sense Media

https://www.com monsense.org/edu cation/digitalcitizenship/lesson/ putting-a-stop-toonline-meanness

Caring – be accepting of others and being kind

(Week 3)

With support, be able to use a safe search engine

Show the Internet is a great place to develop rewarding online relationships and learn to recognise websites that are good for them to visit; but they also learn to be cautious and to check with a trusted adult before sharing private information

e.g. Swigglehttps://swiggle.org.uk/

Introduce to the concept that real people send messages to one another on the Internet and learn how messages are sent and received. Recognise that it may be difficult to distinguish between someone who is real and someone who is not

				Google – Safesearchkids Explore websites and say whether they like them or not Common Sense Media - https://www.commo nsense.org/educatio n/lesson/abc- searching-k-2 (Week 3)
Progression descriptors • Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Communicatio n Publishing and collaborating (Multimedia Word Processing)	Be able to confidently use pointing device Know how to type and format text including basic punctuation and capital letters (Keyboard Activity) http://primarygamesarena.com/Play/Keyboard-2030 Use for writing - https://www.j2e.com/jit5# - basic word processor Powerpoint slide - LA picture of a topic related subject MA / HA Create some ppt slides showing topic related subjects HA present your information using the ppt Forgiving - practise makes perfect and to not give up on yourself (Week 4)	iPad – <i>Book Creator app</i> – create a book about topic related subject OR *Powerpoint* – make a simple presentation – topic related subject (Week 4)	write and illustrate a story (Word) about your Local area / how to look after your pet / topic related subject Caring – encourage a sense of belonging to the local area/community (Week 4)

Digital video Video & Animation Music / Sound	Talk to video about your favourite toy - playback – use to enhance writing. Make a simple animation in Puppet Pals (Week 5) Be able to combine simple text and	Create a short TV advert to promote a visit to Barnard Castle or topic related - iMovies Use microphones and photos for a purpose (Week 5)	School Visit Take video footage / photos - playback to support writing. Sew together clips taken on visit to tell the story of your visit in video / pictures. Use footage from school visit and photos - write recount. (Word) Inspiring — encouraging the pupils to use all of their learnt video editing skills (Week 5) Photo walk of the local area - Photo
Digital Imagery (Graphics & digital cameras)	graphics For instance create a poster for a purpose / leaflet / invitation / electronic book Publisher / Word / Powerpoint / Keynote / Book Creator Be able to save, retrieve and print work For instance create a poster in Publisher, save it, amend it and print it. (Week 6)	Create a simple digital painting https://www.j2e.com/jit, Textease Paint, Pic, Collage or equivalent related to other work in the curriculum. Add a suitable picture into a piece of work. (Week 6)	walk England - where are we on a map – google Earth Caring – encourage a sense of belonging to the local area/community (Week 6)
Handling Information (Database)	Starting Graph Animals (Week 6)	Create and use a Pictogram https://www.j2e.com/jit5#pictogram (Week 6)	Materials – Textease branch https://www.j2e.com/ji t5#branch (Week 7)
Modelling			Explore Online Simulations — Charlie Chimp (Week 7)

YEAR 3 Overview		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing	Programming (Algorithms, Sequencing and testing code)	Rapid Router - levels 1-18 (https://www.code forlife.education/ra pidrouter/) HA 18 +	Be able to use a block program (Scratch Jun, Scratch, Microbit Blocks) to make a simple	Scratch - basic use of Scratch Adding instructions / changing sprites etc	Inputs sets of instructions according to programming language and environment	Independently be able to debug basic mistakes. This skill will be gained from repeated	Begin to use conditionals – If I click here then this happensScratch Junior, Scratch, Microbit activities

Progression Descriptors • Write programs that accomplish specific goals • use sequence in programs • use logical reasoning to explain how some simple algorithms work • recognise uses of information technology beyond school	https://hourofcode .com/uk/learn - find appropriate coding (Week 1-2)	programme using sequencing and timing. Scratch Junior Pathway http://code-it.co.uk/pathway , Microbit — Create a program that displays a welcome message on the Microbit. Extend this so the message changes. Forgiving — practise makes perfect and to not give up on yourself (Week 1-2)	Write programs that accomplish specific goals. Create an animation where characters speak in speech bubbles Use sequence in programs Sequence the animation Work with various forms of input Change the Sprites (input) and the Green flag to start Work with various forms of output Visual output and sounds Honest — encouraging the pupils to sequence accurately (Week 1-2)	(Logo, Scratch Jnr, Microbit etc.) SCRATCH — Simple animation or Dressing up game — to sequence instructions eg. create an animation using Scratch / use timing features in Powerpoint http://code-it.co.uk/scratch/dressingup/dressingupoverview APPs Daisy the Dino — Sequencing Instructions Alex — Sequencing directional Instructions (Week 1-2)	programming tasks. Probots – Make instructions – use Probots / to predict and debug instructions. Routes Round a map of the UK using Probots Use a program Logo or Scratch to draw regular 2D shapes – add loops or procedures to create a repeating pattern Scratch – Drawing shapes http://code-it.co.uk/goldshape/ up to basic procedures Textease or Floor Turtle – they can correct their programs and record their instructions. They can predict the effect of instructions Make a square / initial of name / hexagon / rocket /draw shapes / make pictures Lego Fix the Factory – App teaching sequencing Logo Hour of Code Frozen, Star Wars activities	Scratch Junior My Story http://code- it.co.uk/mystory Microbit Display different messages when buttons are pressed or when device is shaken or changes temperature. Scratch Magic Carpet http://code- it.co.uk/carpet or Travel Europe Extension — create a simple imaginary 3D world (Kodu) that they can explore and describe. Get a character to move on a path around the world. (Week 1-2)
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						https://code.org/learnn Nurturing – support each other after completing individually – share good practise and discuss misconceptions (Week 1-2)	
Digital Literacy	Digital Literacy (Research / Esafety) Digital Citizenship (Online Communication and	Staying Safe Know that some people are the internet should not be trusted	Use a simple password Pupils learn to make good passwords for their accounts	Staying Safe Use a Search engine to find information given key words	Be able to log in and out of websites used at school e.g. Lexia.	The Key to Keywords Common Sense Media https://www.commo nsense.org/educatio	Know that using technology can sometimes be inappropriate.

Progression	E-Safety, DLG,	Know that	Common Sense	Know which		n/lesson/the-key-to-	Device-Free
Descriptors • Use technology	Blogging, E-mail)	concerns about	Media	websites are useful	Password Power	keywords-3-5	Moments
safely, respectfully		what they see	https://www.commo	and begin to	Up		Common Sense Media
and responsibly;		on-line should	nsense.org/educatio	understand that all	Common Sense		https://www.commons
		be reported to a	<u>n/digital-</u>	might not be	Media	Keeping	ense.org/education/di
Use search		trusted adult	citizenship/lesson/pa	trustworthy	https://www.comm	information	gital-
technologies			ssword-power-up		onsense.org/educati	private	citizenship/lesson/devi
effectively		Smart Crew		Is seeing	on/digital-	Common Sense	ce-free-moments
		Videos -	(Week 3)	believing?	citizenship/lesson/p	Media	044 (5thtth-
		http://www.childn		Common Sense	assword-power-up	https://www.commo	Other (Fits in with
		et.com/resources/t		Media	Online Password	nsense.org/educatio n/lesson/private-	PSHCE themes)
		<u>he-adventures-of-</u> kara-winston-and-		https://www.commo	Checker	and-personal-	This is Me
		the-smart-crew		nsense.org/educatio	Common Sense	information-3-5	Common Sense Media
		<u>the-smart-crew</u>		n/digital-	Media	iniomation-3-3	https://www.common
		Honest –		citizenship/lesson/is-	http://www.commo	(Week 3)	sense.org/education/d
		encouraging pupils		seeing-believing	nsensemedia.org/ed	(Week 3)	igital-citizenship/le
		to use the internet		<u>scame concerning</u>	ucators/lesson/pow		sson/this-is-me
		safely and			erful-passwords-k-		
		question if not		<i>Create Posters -</i> to	2How secure is my		The Power of Words
		sure		demonstrate	password?		Common Sense Media
				understanding of key			Bullying
		(Week 3)		issues. (Publisher or	Respectful –		Online
				Pages) http://www.kidsmart	consider and		https://www.commons
				.org.uk/teachers/KS2	appreciate the		ense.org/education/di gital-
				/lessonplans.aspx	importance of keeping personal		gitai- citizenship/lesson/the-
				/IC330HplaH3.d3pX	details private		power-of-words
				Power of words	uctails private		power or words
				Common Sense	(Week 3)		Respectful – consider
				Media	(33 333 37		and appreciate others
				https://www.commo			feelings online
				nsense.org/educatio			· · · · · · · · · · · · · · · · · · ·
				n/lesson/the-power-			(Week 3)
				of-words-3-5			(1100110)
				Common Sense			
				Media			
				https://www.commo nsense.org/educatio			
				n/digital-			
				citizenship/lesson/th			
				e-power-of-words			
				(Week 3)			

I C T Progression Descriptors • Select, use and combine a variety of software to design and create a range of programs, that accomplish given goals, including collecting, presenting data and information	Communication Publishing and collaborating (Multimedia Word Processing)	Be able to log in to computer system as themselves and can find their documents (personal drive) This would relate to any computer-based activity Know how to open shared documents and pictures. On a computer using the shared drive. On an iPad being able to use Air Drop or equivalent to share work. Supportive – if first experience - ask to work in pairs/teams and support each other (Week 4)	Know how to use software to create an e-book, brochure or poster. Learn to write and deliver a presentation on a given topic Publisher or Pages using a variety of content including headlines, text, pictures and graphics. Eg. Make an information leaflet (Week 4)	Know how to sequence and add to slides to make a simple presentation Keynote, Powerpoint, iMovie. The simple presentation should allow pupil to sequence relatively straight forward idea eg. Make an instruction leaflet Be able to create a meaningful document that contains both pictures and text. This could be completed in any appropriate software. Inclusive – discuss all their learnt processing skills and how they have combined to create their slide presentation (Week 4-6)
	Digital video Video & Animation Music / Sound	Take, adapt or create images to enhance or further develop their work Plan and Video a short TV advert - related to current topic Inclusive – try to capture everyone's experiences in planning stage (Week 5)	Develop a storyboard and then create a simple animation - using 'Puppet Pals' or 'Stop Motions' Animation' Respectful – appreciate it can be time consuming to complete and everyone works at different levels (Week 5 -6)	
	Digital Imagery (Graphics & digital cameras)	Topic pictures - add images and amend www.pixlr.com/editor or pixlr app (Week 6)		
	Handling Information (Database)	Use google Earth to locate related topic Courageous— allow children to find countries that they have visited or would like to visit-to take adventures (Week 6)	Use Topic for database / fact file – Textease Database Honest – ensure only facts are researched (Week 6)	

YEAR 4 Overview		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing		Be able to use a program to sequence, use conditionals and use a variety of inputs and outputs	Know how to break sets of instructions into short steps to achieve goal - for instance, drawing repeated squares to	Scratch - Design programs that accomplish specific goals Use a storyboard to plan an	Design and create programs Use repetition in programs Plan a set of instructions to draw	Pupils learn to sequence instructions (Scratch animation or Timings features in Powerpoint)	Textease Turtle — Pictures of topic area landmarks - use on screen turtle to move around HA More complex routes — more difficult
• design write and debug programs that accomplish specific goalssolve		(Logo/Scratch). Pupils write a simple algorithm, for	make a pattern, Scratch — shapes Continuing basic	animation in Scratch, include movements, sounds and hiding	a repeating pattern e.g. the "Spirograph" repeating shapes generated by	Create an animation with several	- drawing shapes Kodu - build a simple world and program an
problems by decomposing them in smaller parts • use sequence,		instance to create a basic traffic light sequence. They then use flowcharting	work started in Y3 but to include work on procedures and nested loops.	characters Scratch - Smoking Car	drawing and rotating. Scratch – write	characters like a "flipbook" Control or	object so that it can be controlled with keys
selection and repetition in programs • use logical		software (such as Go or Flowgo) to create a simple program to control	http://code- it.co.uk/goldshape/	http://code- it.co.uk/scratch/s moking_car/smoki ngcaroverview	programs make more complex screens – with more	simulate physical systems –	Extension – pupils create a simple game using a graphical language such as
reasoning to explain how some simple algorithms work and to detect and correct errors in	Programming (Algorithms, Sequencing and testing code)	an onscreen icon Rapid Router -	Logo – Using nested loops to create repeating patterns	Hour of Code https://studio.code	complex moves Lots of examples at varying levels	simulate simple physical system (e.g. traffic lights)	Kudo or Scratch (Week 1-2)
algorithms and programs • recognise common uses of		levels 1-32 (https://www.codefo rlife.education/rapidr outer/) HA 32 +	Pro Bot – Using loops and nested loops to create	.org/flappy/1 Recognise	http://code- it.co.uk/csplanning - HA try some of the higher Scratch	Supportiive – ask to work in pairs/teams and support each	
information technology beyond school		https://hourofcode.c om/uk/learn - find appropriate coding	geometric patterns Debug programs that accomplish	common uses of information technology beyond school	activities (Week 1-2)	other (Week 1-2)	
		(Week 1-2)	specific goals Use logical reasoning to detect and correct errors in programs	Pupils learn to collaborate electronically by blogging - mailing and working on shared documents	(FECK 1-2)	() () () () () () () () () ()	
			Correct programs when they draw the	using the pupil sites of the DLG			

			"wrong" shape or programme Probot to react to its environment eg. to explore and reverse and turn when it collides with an object Forgiving – practise makes perfect and to not give up on yourself (Week 1-2)	Caring – encourage a sense of belonging to the local area/community (Week 1-2)			
Digital Literacy	Digital Literacy (Research / ESafety) Digital Citizenship (Online Communication and	What makes a healthy media choice	Know that pictures and text share on-line can end up with	Reliably know what to do if they are exposed to unpleasant	Know that having a balance of online and offline activities is important.	Know what the key words are to enter into a Search engine to	Kidsmart – Safe Searching Google – How search works

Progression Descriptors

- Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact
- Use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content

E-Safety, DLG, Blogging, E-mail)

Begin to understand the implications for the information that they share online and how some websites might use that information without their knowledge - check with a trusted adult before sharing private information Common Sense Media https://www.commo nsense.org/educatio

Digital footprint and identity

y-media-choices

citizenship/lesson/m

n/digital-

Common Sense Media https://www.commo nsense.org/educatio n/digitalcitizenship/lesson/ou r-online-tracks

Caring – for the information that they share online and how some websites might use that information without their knowledge

(Week 3)

strangers

Google - Be an Internet Legends

Series of lessons about many aspects of being safe online. https://beinterne tlegends.withgoo gle.com/en uk/to olkit

Cyber-Detectives

 Teacher led lesson where children solve a mystery https://esafety.gov.a u/educationresources/classroom

resources/cybersmar t-detectives

(Week 3)

materials on any device.

Covered by Internet Legends learn about spam and how to deal with it.

Digital citizenship Role

Reflect on how they are responsible not only for themselves but for others, in order to create a safe and comfortable environment Common Sense Media https://www.co mmonsense.org/ education/digital

citizenship/lesso n/rings-ofresponsibility

Keeping Games fun and friendly

Common Sense Media https://www.com monsense.org/edu cation/digitalcitizenship/lesson/

My Media Choices Common Sense

Media https://www.com monsense.org/ed ucation/digitalcitizenship/lesson /my-mediachoices

Reliably uses a more complex password to access resources.

Resources within Internet legends.

Honest – recognise truthfully the amount of time they spend online

(Week 3)

they want.

Introduce basics of online searching, effective keywords. Learn to conduct searches that provide them with the most helpful and relevant information

Pupils learn that the Internet is a public space

Develop the skills to and respect the privacy of others

(Week 3)

find information

including how to use

Consider using first few lessons from Google https://www.google .com/insidesearch/s earcheducation/less ons.html

protect their privacy

A creator's rights and responsibilities

Common Sense Media https://www.commons ense.org/education/di gitalcitizenship/lesson/acreators-rights-andresponsibilities

Explore how they interact with others and are introduced to the concept of cyberbullying

Learn how to communicate to be a responsible member of a connected culture effectively in order to prevent miscommunication

Respectful -of others in different cultures

(Week 3)

	Г		Т	
		keeping-games-		
		fun-and-friendly		
		BBC HH Video		
		http://www.bbc.co		
		.uk/cbbc/watch/p0		
		<u>Onxznx</u>		
		Being a digital		
		Citizen		
		https://www.com		
		monsense.org/edu		
		https://www.com monsense.org/edu cation/digital-		
		citizenship/lesson/ super-digital-		
		super-digital-		
		citizen		

Be able to save a document in a shared folder and retrieve this to continue working on it. Computer. On an iPad work could be shared by Airdrop or equivalent.

For instance, open a presentation template or document started by the teacher and add additional content and material. Publisher, Powerpoint, Word, Documents, Pages, Keynote (Apple devices using air drop)

Communication Publishing and collaborating (Multimedia Word Processing)

Photos to Word / Publisher – add instructions, sequence photos to make a set of instructions

http://cookit.e2bn.org/historycookbook/index-30-romano-british.html

You are a publisher who has been asked to create promotional materials for a new Italian restaurant in Barnard castle. Design what you need.

Supportive – if first experience - ask to work in pairs/teams and support each other

(Week 4-5)

topic

Be able to organise their personal folder effectively for instance by organising work into folders for each year at school

By teacher demonstration and organising work into folders on the school network. Difficult to implement on tablets unless using a cloud system.

Know how to use software to create an e-book, brochure or poster. Learn to write and deliver a presentation on a given topic

Publisher or Pages using a variety of content including headlines, text, pictures and graphics.

Eq. Make an information leaflet

Create and sequence a simple linear Powerpoint and add some animated effects - linked to current topic

Inclusive – discuss all their learnt processing skills and how they have combined to create their slide presentation

(Week 4-5)

Know how to change font size and style; include shapes and backgrounds and to use the Spellcheck function

To produce a piece of work related to other learning for instance in English or the Humanities.

(Week 4)

To be able to use sequence to create an effective presentation or video Keynote, Powerpoint or iMovie.

Digital video
Video & Animation
Music / Sound

Pupils to sequence key ideas before delivering presentation Keynote, Powerpoint Slides

Be able to deliver a simple presentation to their peers Plan and Video a short TV advert to tell people about the issues surrounding current **Record and Edit Media (iMovies)** – create a short sequence around topic

Garage band App – create some mesmerising music, use instruments and video

(Week 6)

Develop a storyboard and then create a simple animation - using 'Stop Motions' Animation

Respectful – appreciate it can be time consuming to complete and everyone works at different levels

Plan a short information video on a place in North East – share with others
Photos – distort / amend using pixlr. Can we guess where it is? www.pixlr.com/editor

	Inclusive – try to capture everyone's experiences in planning stage (Week 6)		(Week 5-6)
Digital Imagery (Graphics & digital cameras)	Topic pictures - add images and amend www.pixlr.com/editor or pixlr app (Week 7)	Take, adapt or create images to enhance or further develop their work (Week 7)	
Handling Information (Database)	Use Google Earth - locate current topic Courageous – allow children to find countries that they have visited or would like to visit-seek adventure (Week 7)	Learn to Search, Sort and Graph Information (Database) — eg your top ten places to visit in the North-East (Week 7)	Pictogram - Textease Database (Week 7)

Overview Year 5		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computer Science Progression Descriptors • Design, write and debug programs that accomplish specific goals • Use selection in programs • Work with variables • Use logical reasoning to explain how some simple algorithms work • Use logical reasoning to detect and correct errors in algorithms	Programming (Algorithms, Sequencing and testing code) Beebot / Roamer / Probot Programming apps	Scratch Refresher of basics http://code- it.co.uk/csplannin g.html Solve problems by decomposing them into smaller parts Use selection in programs Create a simple game that moves a sprite around the stage. Movement can be controlled by using the arrow keys Create a more complex animation that makes use of the broadcast command to control processes Work with variables	Use logical reasoning to explain how some simple algorithms work Use logical reasoning to detect and correct errors in algorithms Design an animation using a storyboard, adding movement and sounds. Debug and be able to explain how it works. Use customisation to change a working program and its effect — eg. backgrounds and sprite in Scratch Scratch — Build a Scene http://code-it.co.uk/goldscene where code is modified to have different effects.	Kodu Starting Activity - make a fish tank https://www.yout ube.com/watch?v =9cypjWtamGc Create an on- screen game in Kodu - that makes use of movement and includes a scoring system. eg "Shooting Fish" and collects/eats things Challenge - Add criteria for winning and losing. Use of Microbits Simple programming using Microbits Hour of Code https://hourofcod e.com/nz/learn	Rapid Router - Levels 19 to 32 Lightbot App — completing procedures and loops sections Fix the Factory App — sequencing instructions Powerpoint - take a simple working hyperlinked presentation and to customise it by adding additional content and navigation. Supportive — as primary experience of creating simple loops - ask to work in pairs/teams and support each other (Week 1-2)	Uses variables, conditional sentences (when/then), external triggers and loops to achieve set goals (creating game in Scratch, an interactive slide in Powerpoint or Keynote for instance to create an interactive story) Microbit - Temperature activity lesson Powerpoint — Create an interactive story which has different endings depending on the choices made. (Week 1-2)	Use loops to achieve goals Scratch – Slug Trail http://code- it.co.uk/scratch/slugtrai l/slugtrailoverview Uses an input to steer an on-screen object Scratch – Crab Maze http://code- it.co.uk/scratch/crabma ze Kodu – Create a game where the character gets points for instance by collecting coins. (Week 1-2)

		Include a simple scoring system that records how many times the sides of the maze are hit! (Week 1-2)	Or Helicopter Game http://code-it.co.uk/goldgame/ Write a simple algorithm — create a basic traffic light sequence (Go/Flowgo) Forgiving — practise makes perfect and to not give up on yourself (Week 1-2)	Microbit - Rock Paper Scissors Lesson Microbit - Snowflake Fall Lesson Rapid Router- Levels 13-18 (Week 1-2)			
Digital Literacy	Citizenship (Research) SWGFL scheme of work (Online Communication and E-Safety, DLG, B	Learn that the internet is a great place where online relationships can be	Explore their roles as digital citizens in an online community, where they reflect on their	Know that a balance of online and offline activities is important to	Effective on-line searching using effective keywords, using directories and subject	Know how to compare information from different websites and know that	Know the 'do's and don'ts' of copying and pasting information to avoid plagiarism. Learn how to avoid plagiarism by

Progression Descriptors

- Use technology safely, respectfully and responsibly
- Recognise acceptable/ unacceptable behaviour
- Use search technologies effectively

developed.
Compare and
contrast online
friends and real
life, face to face
friends and
learn how to
respond if an
online friend
asks them a
personal
question

Know the risks posed to them by using Social Media, including understanding that people may not be who they say they are.

Know that it is irresponsible to share images of friends on-line without their permission.

Know how to report concerns on-line.

Play Like Share - CEOP

https://www.think uknow.co.uk/prof essionals/resource s/play-like-share/

What is Cyberbullying? Common Sense Media responsibilities and learn that good digital citizens are responsible and respectful in the digital world

Our Digital Life
Common Sense
Media
https://www.comm
onsense.org/educat
ion/lesson/digitallife-101-6-8

Digital Friendships

Common Sense Media https://www.comm onsense.org/educat ion/digitalcitizenship/lesson/d igital-friendships

Caring – encourage a sense of belonging to the local area/community

(Week 3)

maintain good health.

My Media
Choices
Common Sense

Media

https://www.com monsense.org/ed ucation/digitalcitizenship/lesson /my-mediachoices

Caring – pay close attention to others opinions

(Week 3)

categories, and how to analyse the usefulness and relevancy of the results.

Effectively use a search engine to find multiple criteria using AND/OR to refine searches

Google Search Lessons

https://sites.google.com/site/gwebsearcheducation/lessonplans

(Week 3)

some sites may show bias

*Trust Me*https://www.lgfl.net/online-safety/trust-me

Reliability of Websites

www.allaboutexplore s.com Horrible Histories – Useful as a starter about reliability

Learn to create secure passwords for their accounts. On line password checker https://howsecur eismypassword.ne

Respectful –
appreciate the
reasons for
passwords and their
important role in
internet safety

(Week 3)

t/

putting information in their own words, putting excerpted information into quotes, and providing citations. Learn to show respect for other people's creations by giving them credit

Other A Creators Rights and Responsibilities

Common Sense Media https://www.commons ense.org/education/digital-citizenship/lesson/acreators-rights-and-responsibilities

Livestreaming good and bad attention

https://www.thinkukno w.co.uk/professionals/r esources/livestreaming/

(Week 3)

		https://www.com monsense.org/ed ucation/digital- citizenship/lesson/ whats- cyberbullying Caring – be accepting of others and being kind Honest – encouraging pupils to use the internet safely by not sharing their personal information or anyone else's over the internet (Week 3)					
I	Communication Publishing and collaborating (Multimedia Word Processing)	their personal fold collaboratively with Collectively generate each pupil, or group slides which are the	e a presentation with so of pupils creating in sequenced die be done by using a setwork or sharing agh Air Drop. This	use software to cre	on a given subject,	effective poster or l	oint or Pages to create a

Progression descriptors • Select, use and combine a variety of software on a range of digital devices to design and create a range of programs that accomplish given goals, including collecting and presenting data and information	Digital video Video & Animation Music / Sound	Develop a storyboard and then create a simple animation — using 'Stop Motions Animation' Forgiving — practise makes perfect and to not give up on yourself (Week 4-5)	Independently, prepare an effective presentation to show their learning to others which includes some elements of timing or sequence - for instance, in Keynote, Powerpoint, iMovie – eg add photos of Topic to iMovie and voice over to tell the story Respectful – appreciate and celebrate each other's presentations Create promotional materials - Publisher Greenscreen – Make a short documentary style video (iPad) about the above (Week 5-6)	Independently, prepare an effective presentation to show their learning to others which includes some elements of timing or sequence — make a short TV documentary about life within a Topic subject (iMovie) Courageous — encouraging the pupils to use all of their learnt video editing skills (Week 5-6)
	Digital Imagery (Graphics & digital cameras)	Pop art - pixlr app on iPAD – on current topic to distort/change images www.pixlr.com/editor Add effects / amend (Week 6)		Pop art - pixIr app on IPAD – on current topic to distort/change images www.pixIr.com/editor Add effects / amend (Week 7)
	Handling Information (Database / Spreadsheets)		Using software know how to add data into a prepared spreadsheet to answer simple questions - using Excel – budget for a school party/function. Search, sort and graph information Supportive/caring- encourage all to be independent in their activity but to also support one another (Week 7)	

Year 6 Overview		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Progression descriptors Design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems and solving problems by decomposing them into smaller parts Use sequence, selection and repetition in programs Work with variables and various forms of input and output Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms	Programming (Algorithms, Sequencing and testing code) Beebot / Roamer / Probot Programming apps	Scratch - Refresher of basics Solve problems by decomposing them into smaller parts Use selection in programs Create a more complex game/animation that includes using the Broadcast command to pass control between elements Work with variables Use logical reasoning to explain how	Use conditional sentences (when/then) to program Scratch objects Scratch For instance fortune telling using PRIMM Harder egs. of Scratch http://code-it.co.uk/csplanning.html examples that could be used or add own from link above Use conditional sentences (when/then) to program objects but use mathematical expressions	Microbit - for Instance - Magic Button Activity Light Bot App - additional levels not completed in Y5 which will reinforce learning (completing procedures and loops sections) Fix the Factory App - sequencing instructions Cargo Bot App - sequencing instructions - procedures and developing efficiency Rapid Router level 51+	Kodu - for instance a racing game that makes use of movement and includes a scoring system Microbit - for instance Die Roll and Compass activity Honest - encouraging the pupils to use precise instructions (Week 1-2)	Be able to explain what a program might do and accurately predict the effect of changes Print and annotate the code for a programming project and explain any changes made that make the program better Know that Networks are interconnected — activities http://www.code-it.co.uk/netintsearch.ht ml Collaborate electronically by blogging - mailing, and working on shared documents using the pupil sites of the DLG.	Know that networks are interconnected. Activities http://www.code- it.co.uk/netintsearch. html Create more difficult / advanced Kodu screens https://www.youtube .com/watch?v=zTaW snyXfzc Develop an on- screen game in Kodu - such as "Space Invaders" Include a variable to manage a simple scoring system movements and scoring.
and programs • Understand computer networks including the internet; how they can provide multiple services, such as the world wide web, and the opportunities they offer for		some simple algorithms work Include a simple scoring system, and a system to determine when the game has	when constructing conditionals eg trigger winning when (If loops >5 then) Scratch - for instance Coins (change machine)	Nurturing – as primary experience of creating simple loops - ask to work in pairs/teams and		Extension - work with other schools Pupils learn that connected devices exchange packets of data and this can convey a range of information from a text to a video call	Challenge - Complete one of the Mars Explorer missions available in Kodu (examples on YouTube) Extension - begin to program a Raspberry Pi to create and test

communication and collaboration		been won. (This should include a conditional response) Write a simple algorithm – use flowcharting software (Go/Flowgo) to create a simple program to control an onscreen icon and explain how the program works (Week 1-2)	Use logical reasoning to detect and correct errors in algorithms Design a plan for their game to help explain how the algorithm works and debug it when it fails! Forgiving – practise makes perfect and to not give up on yourself (Week 1-2)	support each other (Week 1-2)		Caring – encourage a sense of belonging to the local area/community (Week 1-2)	elements of code in Python. Start to appreciate how the device stores and executes instructions. (Week 1-2)
Digital Literacy	Digital Literacy & Citizenship (Research) SWGFL scheme of work (Online Communication and E-Safety, DLG, B	Know how to reduce the risks posed by using Social Media by managing	Know that having a healthy balance of online and offline activities is important for health.	Know how to validate information found through searches by checking more than one source.	Begin to consider the impact of their online presence on their own self- image and the way others see them and explore how	Know that hacking or misusing someone else's account is illegal. This is covered in some of the Google Internet	Know that search results can be manipulated by sponsorship and advertising. You won't believe this!

Progression descriptors

- Use technology safely, respectfully and responsibly
- Recognise acceptable/ unacceptable behaviour
- · Identify a range of ways to report concerns about content and contact
- Use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content

their friends lists and privacy settings. Game On

https://esafety.gov .au/educationresources/classro omresources/gameo n

Digital Friendships -

Common Sense Media (Online friendships) https://www.comm onsense.org/educ ation/digitalcitizenship/lesson/ digital-friendships

Respectful encouraging encouraging encouraged and encouraged encouraged encouraging encou pupils to use the internet safely by managing privacy settings correctly

(Week 3)

Findina mv media balance

Common sense media

nsense.org/educati on/digitalcitizenship/lesson/fi nding-my-mediabalance

Understand what it means to be a super digital citizen as they interact with others online by understanding how to prevent and respond to cyberbullying. Learn how to communicate effectively to prevent miscommunicati on in order to be a responsible member of a connected culture

Super Digital Citizen

Media https://www.comm onsense.org/educat

Conduct searches that provide them with the most helpful and

relevant

information

Learn about

spam and how

to deal with it,

website privacy

understanding

implications for

London Grid for

learning - what

can we "Trust"

https://www.lgfl.n

safety/trust-me

Google Search

Follows on from

Google Landing,

Mixed Media and Quick Finds.

https://sites.googl

e.com/site/gwebs

earcheducation/le

ssonplans

Know that

'fake.'

some news is

lessons in Y5.

the info that

they share

online

et/online-

and decode

policies,

the

https://www.commo

Common Sense ion/digital-

to construct a positive online profile

Know that it is illegal to post or view 'rude' images of children.

This may be covered as part of PSHCE. Related work

Caring – be accepting of others and being kind

(Week 3)

Legends and Play Like Share materials.

Develop skills for evaluating websites, online information and advertising by rating the trustworthiness and usefulness of websites, and learn to identify the different types of online advertising

Respectful understanding that misusing any personal details or accounts is wrong

(Week 3)

Internet Legends -Interland Game

Common Sense Media https://www.common sense.org/education/ digitalcitizenship/lesson/you -wont-believe-this

Begin to explore the nature of online audiences and permanency of information online. Begin to understand the significance of published information and personal information

(Week 3)

Internet Legends -Interland Game

	citizenship/lesson/s	http://fakenews.l		
	uper-digital-citizen	gfl.net		
	<u>uper-digital-citizeri</u>	gninet		
	Caring – pay close	(Week 1-2)		
	ettention to other	(110011 2 2)		
	attention to others			
	opinions			
		Reliability of		
		Websites		
		www.allaboutexpl		
		ores.com		
		Horrible Histories		
		– useful as a		
		starter about		
		reliability: -		
		Google search		
		Jougie Searcii		
		lessons		
		https://www.goo		
		gle.com/intl/en-		
		us/insidesearch/s		
		us/insidesearch/s		
		earcheducation/le		
		ssons.html		
		lgfl Trust me		
		https://www.lgfl.		
		net/online-		
		cafety/truct me		
		safety/trust-me		

I	Communication Publishing and collaborating (Multimedia Word Processing)	Digital Publishing - learn how to use software to create an e-book, brochure or poster on a given subject, incorporating a range of media - for instance, create a presentation and a key facts handout for a topic (Week 4)	Make a presentation (ppt – prezzi – keynote) about current topic – use photos and video. Add hyperlinks hotspots to link ppt pages – present to an audience. Respectful – appreciate and celebrate each other's presentations (Week 4)	Pupils use a simple blog to share ideas and collaborate Pupils use a blog and incorporate multimedia elements to make it more attractive to the audience (Week 4)
Progression descriptors • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	Digital video Video & Animation Music / Sound	Learn how to develop a storyboard and then create a simple animation - 'Stop Motions Animation' – extend by editing the final product in using video editing software Forgiving – practise makes perfect and to not give up on yourself (Week 5)		To create and sequence a video, add sound effects, transitions and title/subtitles - use all the main features in iMovie to make an effective short film with incorporates stills with movement, text, sounds and narration or create a simple video in Windows. (Week 5)
	Digital Imagery (Graphics & digital cameras)	Pop art - pixIr app on iPAD – Current Topic www.pixIr.com/editor Add effects / amend (Week 6)	Know how to edit a picture. For instance, in Paint.net Be able to use layers, add filters, select areas to modify, add text or other appropriate content. (Week 5-6)	To be able to use two or more programmes to create a final piece of work. (e.g. edit a picture before inserting into a document). Create a video that then is incorporated into a presentation or edit a picture which might then be used as a background in a presentation etc. Courageous — encouraging the pupils to use all of their learnt video editing skills Extension - Edit a webpage by using X-Ray Goggles. Print the finished version. Write a webpage to be published internally and include interactive content (Week 6)
	Handling Information (Database / Spreadsheets)			Know how to create a simple formula in a spreadsheet to work out given mathematical tasks such as adding a set

		of numbers - for instance, use Excel, Sheets or Numbers to create a spreadsheet that would work out the value of stock in a school tuckshop. (Multiplication and addition of columns). Search, sort and graph information Caring/supportive—encourage all to be independent in their activity but to also support one another
		(Week 7)