

Computing Knowledge and Skills Progression Map

Computing programme of study: National Curriculum Aims

The National Curriculum for Computing aims to ensure that all children:

- 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
- re responsible, competent, confident and creative users of information and
- communication technology.

Computing programme of study: Knowledge and understanding of computer science

National Curriculum: All pupils will know how to apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. In addition, all pupils will know how to analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems. They will be able to evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems and be responsible, competent, confident and creative users of information and communication technology.

	Multimedia Text and Images								
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6			
Skills	I can add text strings, text boxes and show and hide objects and images, manipulating the features	I can add text strings, text boxes and show and hide objects and images, manipulating the features	I can create different effects with different technological tools, demonstrating control and use appropriate keyboard commands to amend text on a device	I can create different effects with different technological tools, demonstrating control and use appropriate keyboard commands to amend text on a device	I can use the skills already developed to create content using unfamiliar technology	I can use the skills already developed to create content using unfamiliar technology			

	I know how to	I know how to	I know how to	I know with	I know how to	I know how to
	contribute to a	generate my	create and begin	increasing	select an	collect
	whole class	own	to edit	confidence and	appropriate ICT	information and
	digital resource	multimedia	presentation	accuracy how to	or online tool to	media from a
	that includes	work, with	documents and	use a keyboard	create and share	range of sources
ge	text, graphics and	help, adding	text,	effectively,	ideas	(considering
leo	sound	text and	experimenting	including the use of		copyright issues)
Knowledge		images to a	with fonts, size,	keyboard shortcuts		into a
Α		template	colour, alignment			presentation for
		document	for emphasis &			a specific
		using an	effect			audience
		image and				
		word bank				
		1	1	1	Language van	Lean calcat was
	I can use various	I can use	I can use	I can use	I can select, use	I can select, use and combine the
	tools, such as	various tools, such as	applications and devices in order to	applications and devices in order to	and combine	
	brushes, pens, eraser, stamps	brushes, pens,	communicate	communicate ideas,	the appropriate technology tools	appropriate technology tools
Skills	and shapes, and	eraser, stamps	ideas, work, and	work, and messages		to create effect
X	set the size,	and shapes,	messages	work, and messages	to create effect	to create effect
	colour and shape	and set the	illessages			
	colour and snape	size, colour				
		and shape				
		and snape				

	I am beginning to	I know how to	I know how to	I know how to	I know how to	I know how to
	know how to use	use an	explore and begin	explore and	use a wide	use sound,
	brushes, pens,	increasing	to evaluate the	evaluate the use of	range of effects	images, text,
	rubber, stamps	variety of	use of multimedia	multimedia to	in art programs	transitions,
	and shapes when	tools and	to enhance	enhance	and online tools,	hyperlinks and
	using paint	effects in	communication	communication and	discussing the	HTML code
dge	programs to	paint		appeal to different	choices made	effectively in
-lec	create a picture	programs and		audiences	and their	presentations
Knowle		talk about my			effectiveness	
ᅐ		choices				

	I can use key	I can use	I can save,	I can save,	I can review and	I can review and
	vocabulary to	applications	retrieve and	retrieve and	improve my own	improve my own
	demonstrate	and devices in	evaluate work,	evaluate work,	work and	work and support
	knowledge and	order to	making	making	support others	others to
	understanding in	communicate	amendments	amendments	to improve their	improve their
	this strand: paint,	ideas, work,			work	work
	colour, brush,	messages and				
	tools, settings,	demonstrate				
	undo, redo, text,	control				
	image, size,					
	poster, launch,					
Skills	application,					
S	software,					
	window,					
	minimise,					
	restore, size,					
	move, screen,					
	close, click, drag,					
	log on, log off,					
	keyboards, keys,					
	mouse, click,					
	button, double					
	click, drag,					
	present					

Knowledge	I know what brush, paint, colour, tools, size, image, drag, mouse, click, keys and button means	I know how to create my own documents, adding text and images and use a keyboard with increasing confidence	I know how to amend text by highlighting and using SELECT/ DELETE and COPY/ PASTE and save changes made	I know how to use and change font sizes and effects such as bullet points appropriately and save changes made I know how to use spell check to improve the accuracy of my work	I know how to review my own, and a friend's work and provide feedback that is constructive and specific.	I know how to evaluate the effectiveness of my own work and the work of others and provide constructive feedback
Skills	I can save, retrieve and organise work	I can save, retrieve and organise work	I can insert a picture/text/grap h/hyperlink from the internet or a personal file	I can insert a picture/text/grap h/ hyperlink from the internet or a personal file	I can save, retrieve and evaluate my work, making amendments	I can save, retrieve and evaluate my work, making amendments

	With support, I	I know when	I am beginning to	I am becoming	I am confident	With a greater
	• •			confident in		
	know how to	and how to	know how to		in knowing how	degree of
	save, retrieve and	use the	improve my work	knowing how to	to improve my	accuracy and
	print work	RETURN/	by adding	improve my work	work by	complexity, I
		ENTER key	picture/text/graph	by inserting and	inserting and	know how to
		and use SHIFT	/ hyperlink to	modifying a	modifying a	improve my work
		& CAPS LOCK	improve	picture/text/graph/	picture/text/gra	by inserting and
ge		to enter	effectiveness	hyperlink to	ph/ hyperlink to	modifying a
led		capital letters.		improve	improve	picture/text/
Knowledge		I know how to		effectiveness	effectiveness	graph/ hyperlink
Kn		use DELETE &			and save	to improve
		BACKSPACE			changes made	effectiveness and
		buttons to				save changes
		correct text				made
		and create				
		sentences,				
		SAVE & edit				
		later.				

	I can use key	I can use key	I can use key	I can insert a	I can insert a
	vocabulary to	vocabulary to	vocabulary to	picture/text/gra	picture/text/
	demonstrate	demonstrate	demonstrate	ph/ hyperlink	graph/ hyperlink
	knowledge	knowledge and	knowledge and	from the	from the internet
	and	understanding in	understanding in	internet or	or personal file
	understanding	this strand	this strand building	personal file	
	in this strand:	building on prior	on prior knowledge		
	paint, colour,	knowledge by	by adding: draw,		
	brush, tools,	adding: draw,	object, shape, line,		
	settings,	object, shape, line,	line colour, fill		
	undo, redo,	line colour, fill	colour, group,		
	text, image,	colour, group,	ungroup, font, size,		
<u>S</u>	size, poster,	ungroup, font,	text box, format,		
Skills	launch,	size, text box,	image, wrap text,		
0,	application,	format, image,	plan, link, image,		
	software,	wrap text, plan,	object, link,		
	window,	link, image, object,	hyperlink,		
	minimise,	link, hyperlink,	minimise, restore,		
	restore, size,	minimise, restore,	size, move, screen,		
	move, screen,	size, move, screen,	split, create,		
	close, click,	split, create,	organise, file,		
	drag, log on,	organise, file,	folder, close, exit,		
	log off,	folder, close, exit,	search, print,		
	keyboards,	search, print,	password,		
	keys, mouse,	password,	screenshot,		
	click, button,	screenshot,	snipping tool, shift,		
		snipping tool,	undo, redo, menu,		

	double click, drag, present	shift, undo, redo, menu, dictionary, highlight, cursor, toolbar, spellcheck.	dictionary, highlight, cursor, toolbar, spellcheck.		
Knowledge	I know what software, double click, window, minimise, restore, move and close mean	I know what create, organise, folder, search, password, screenshot, snipping tool, shift, undo, redo, toolbar and highlight mean	I know what spellcheck, password, menu, line, line colour, fill colour, group, ungroup and text box mean	I know how to insert a picture/text/gra ph/ hyperlink from a variety of sources to enhance the structure of presentations	With a greater degree of confidence and complexity, I know how to insert a picture/text/grap h/ hyperlink from a variety of sources to enhance the structure of presentations

	I can use key I can use ke	ey
	vocabulary to vocabulary	to to
	demonstrate demonstra	ite
	knowledge and knowledge	and
	understanding understand	ding in
	in this strand this strand	
	building on prior building on	n prior
	knowledge by knowledge	by
	adding: window, adding: win	ndow,
Skills	layout, text, layout, text	t, font,
Ski	font, colour, colour, for	mat,
	format, heading, heading,	
	hyperlink, 2D hyperlink, 2	2D
	shape, 3D shape,	shape,
	shape, orbit, orbit, pan,	zoom,
	pan, zoom, eraser,	
	eraser, dimension,	,
	dimension, measurement	ent,
	measurement, guide	
	guide	

Knowledge					I am beginning to know what heading, hyperlink, 2D shape, 3D shape, orbit, pan, zoom, eraser, dimension, measurement, guide means	I know what heading, hyperlink, 2D shape, 3D shape, orbit, pan, zoom, eraser, dimension, measurement, guide means
			Multimedia, Sou	und and Motion		
Skills	I can use software to record sounds	I can use software to record sounds	I can use software to record, create and edit sounds and capture still images	I can use software to record, create and edit sounds and capture still images	I can collect audio from a variety of resources including own recordings and internet clips	I can collect audio from a variety of resources including own recordings and internet clips

Knowledge	I know, with support, how to use a sound recorder to record my own voice and play it back to the class	I know how to explore the effects of sound and music in animation and video	I know how to use ICT tools to create musical phrases	I know how to use art programs and online tools to modify photos and musical phrases for a specific purpose using a range of effects	I know how to use online tools to download audio and internet clips to use within a presentation	I know how to collect information and media from a range of sources (considering copyright issues) into a presentation for a specific audience
Skills	I can change sounds recorded	I can change sounds recorded	I can change recorded sounds, volume, duration and pauses	I can change recorded sounds, volume, duration and pauses	I can use a digital device to record sounds and present audio	I can use a digital device to record sounds and present audio
Knowledge	I know, with support, how to change the sounds I have recorded	With increasing confidence, I know how to make simple changes to the sounds I have recorded	I know how to amend musical phrases I have created using ICT tools	I know how to use ICT tools to create and modify music phrases for a specific purpose	I know how to select an appropriate ICT or online tool to create and share ideas.	I know how to identify the purpose for selecting an appropriate online tool

	I	I	T	T	I	I
	I can save,	I can save,	I can use software	I can use software	I can trim,	I can trim,
Skills	retrieve and	retrieve and	to capture video	to capture video for	arrange and edit	arrange and edit
S	organise work	organise work	for a purpose	a purpose	audio levels to	audio levels to
					improve quality	improve quality
	I am beginning to	I know how to	I am beginning to	I know, with a good	I am beginning	I know how to
	know how to use	use a	know how to	degree of	to know how to	make more
٥	a keyboard to	keyboard with	explore the use of	confidence, how to	use audio	complex changes
gp	save and find	increasing	video, animation	create and modify	editing tools	to a piece of
Knowledg	work	confidence to	& green screening	clips to achieve a	such as Audacity	audio using an
) Ju		save and find		specific purpose	to edit a piece of	audio editing tool
		work			audio and	such as Audacity
					improve its	
					quality	
	I can use key	I can use key	I can crop and	I can crop and	I can publish my	I can publish my
	vocabulary to	vocabulary to	arrange clips to	arrange clips to	animation and	animation and
	demonstrate	demonstrate	create a short film	create a short film	use a movie	use a movie
S	knowledge and	knowledge			editing package	editing package
Skills	understanding in	and			to edit/refine	to edit/refine and
S	this strand:	understanding			and add titles	add titles
	commands, add	in this strand:				
	sound	commands,				
		add sound				

	I know and	I know when	I am beginning to	I know how to	I am beginning	I know how to
	recognise what	and how to	know how to	explore the use of	to know how to	create and edit
	commands and	use the	record, crop and	video, animation, &	explore the	my animations
	sound mean in an	RETURN/	arrange clip using	green screening to	effects of	and publish with
	ICT context	ENTER key. I	such ICT tools as	create a short film	multimedia	a higher degree
		know how to	iMovie	for a specific	(photos, video,	of complexity
		use SHIFT and		audience	and sound) in a	
		CAPS LOCK to			presentation or	
ge		enter capital			video and show	
Knowledge		letters. I know			how they can be	
 0(how to use			modified and	
Ā		the DELETE &			publish.	
		BACKSPACE				
		buttons to				
		correct text. I				
		know how to				
		create simple				
		sentences,				
		SAVE and edit				
		later.				

		I can plan an	I can plan an	I can use key	I can use key
		animation and	animation and	vocabulary to	vocabulary to
		move items within	move items within	demonstrate	demonstrate
		each animation for	each animation for	knowledge and	knowledge and
		playback	playback	understanding	understanding in
				in this strand:	this strand:
				audio, record,	audio, record,
				edit, play stop,	edit, play stop,
				skip, waveform,	skip, waveform,
				input, output,	input, output,
				record, edit,	record, edit, play
<u>s</u>				play podcast,	podcast, digital
Skills				digital content,	content,
0,				downloadable,	downloadable,
				backing track,	backing track,
				voiceover, mute,	voiceover, mute,
				gain,	gain, production,
				production,	post-production,
				post-production,	documentary,
				documentary,	project,
				project,	evaluation,
				evaluation,	screening,
				screening,	ceremony,
				ceremony,	upload
				upload	

	I am beginning to	I know how to	I know what	I know what
	know how to	manipulate and	podcast, backing	production, post-
ge	create and edit an	modify an	track,	production,
wled	animation,	animation I have	downloadable,	evaluation,
0	experimenting	created for	documentary	screening,
Kn	with playback for	playback purposes	and project	ceremony and
	emphasis and		mean	upload mean
	effect.			

	I can use key	I can use key	
	vocabulary to	vocabulary to	
	demonstrate	demonstrate	
	knowledge and	knowledge and	
	understanding in	understanding in	
	this strand: audio,	this strand: audio,	
	sound, video,	sound, video,	
	movie, embed,	movie, embed, link,	
	link, file format,	file format,	
	animate,	animate,	
IIs	animation, still	animation, still	
Skills	image,	image,	
	thaumatrope,	thaumatrope,	
	zoetrope,	zoetrope,	
	zoopraxiscope,	zoopraxiscope,	
	stereoscope, flip	stereoscope, flip	
	book, frame,	book, frame, onion	
	onion skinning,	skinning, loop,	
	loop, frame rate,	frame rate, record,	
	record, stop, play,	stop, play, stop	
	stop motion, stop	motion, stop frame	
	frame.		
(I)	I know the	I know the meaning	
dg	meaning of audio,	of format, onion	
wle	sound, record,	skinning, stop, play,	
Knowledge	link, frame and	stop motion and	
$\mathbf{\Sigma}$	animation	stop frame	

	Handlin	g Data		
	I can talk about	I can talk about the	I can construct	I can construct
S	the different ways	different ways data	data on the	data on the most
Skills	data can be	can be organised	most	appropriate
0,	organised		appropriate	application
			application	
	I know how to	I know how to plan	I know how to	I know how to
	interpret data	and create a	collect and	use the whole
	presented in	database to	record data and	data process –
	different ways	organise data in	present the	generate,
Knowledge	from pre-prepared	different ways	information	process,
/lec	databases		using a	interpret, store,
Not			spreadsheet or	and present
X			database	information –
				realising the need
				for accuracy and
				checking
				plausibility.
	I can sort and	I can sort and	I can use	I can use
	organise	organise	keyboard	keyboard
	information to use	information to use	shortcuts and	shortcuts and
lls	in other ways	in other ways	functions to	functions to input
Skil			input data on	data on
			spreadsheets	spreadsheets and
			and create	create formulas
			formulas for	for spreadsheets
			spreadsheets	

		Llus avvi la avvi ka vvaa	1 1	L lucassi hassi ka	L les servisses
		I know how to use	I know how to	I know how to	I know how to
		connections with	identify different	begin to use	interrogate a
e		Maths to	types of data	more complex	database,
gpa		organise/sort		search	refining searches
W		information into		techniques such	to provide
Knowledge		graphs for		as and/or;≤/≥	answers to
		example on the		to return results	questions.
		Topmarks website			
		and Google Docs			
		I can search a	I can search a	I can interpret	I can add data to
		ready-made	ready-made	data, including	an existing
Skills		database to	database to answer	spotting	database
SK		answer questions	questions	inaccurate data	
				and comparing	
				data	
		I know how to use	I am beginning to	I am beginning	I know how to
		a branch database	know how to ask	to know how to	accurately enrich
a		to sort	questions carrying	identify poor	data within an
gp		information in	out simple searches	quality data and	existing database
wle		different ways to	on a pre-prepared	solve problems	to return higher
Knowledge		represent the	database	and present	quality results
		answers to a		answers using	
		variety of		data tools	
		questions			

		I can use key	I can use key	I can use key	I can use key
		vocabulary to	vocabulary to	vocabulary to	vocabulary to
		demonstrate	demonstrate	demonstrate	demonstrate
		knowledge and	knowledge and	knowledge and	knowledge and
		understanding in	understanding in	understanding	understanding in
		this strand: Google	this strand: Google	in this strand:	this strand:
		Docs, insert table	Docs, insert table	Google Docs,	Google Docs,
				insert, table,	insert, table,
Skille				spreadsheet,	spreadsheet, cell,
7	5			cell, row,	row, column,
				column,	formula/formulas
				formula/formula	, calculate,
				s, calculate,	format, edit,
				format, edit,	insert, ascending,
				insert,	descending
				ascending,	
				descending	

Knowledge			I am beginning to know what google docs is and understand that information can be represented in different ways when inserted into a table/graph Technology	information can be represented in different ways when inserted into a table/graph	I am becoming more confident with knowing spreadsheet terminology to include the meaning of formulas, ascending and descending	With confidence, I know what calculate, edit and format mean
Skills	I can recognise ways that technology is used in the home and community, e.g. taking photos, blogs, shopping	I can recognise ways that technology is used in the home and community, e.g. taking photos, blogs, shopping	I can explain ways to communicate with others online	I can explain ways to communicate with others online	I can search for information using appropriate websites and advanced search functions within Google	I can search for information using appropriate websites and advanced search functions within Google

	I know how to	I know how to	I know how to use	I know what social	I know what	I know how to
	play games on a	play games on	tools to	media is and how it	effective	use Google to
	tablet, take	a tablet, take	communicate with	can be used to help	strategies to use	conduct
	photographs and	photographs	others online such	me keep in touch	to return	advanced
	understand how	and	as email	with people online	appropriate	searches as part
ge	mobile phones	understand			results when	of a research
\lec	are used to stay	how mobile			using a search	project
Knowledge	in touch with	phones are			engine to find	
 	people we care	used to stay in			information	
	about	touch with			online such as	
		people we			framing	
		care about			questions	
	I can use links to	I can use links	I can describe the	I can describe the	I can use	I can use
	websites to find	to websites to	world wide web as	world wide web as	strategies to	strategies to
	information	find	the part of the	the part of the	check the	check the
<u>S</u>		information	internet that	internet that	reliability of	reliability of
Skills			contains websites	contains websites	information	information
0,					(cross-check	(cross-check with
					with another	another source
					source such as	such as books)
					books)	

	I know how to	I know how to	I know the	I know the purpose	I am beginning	With increased
	use the internet	use the	purpose of the	of the world wide	to know that	confidence, I
	to play and learn	internet to	world wide web	web and	some sources of	know that some
		play and learn	and understand	understand that it	information	sources of
		and begin to	that it contains	contains websites	online are better	information
ge		understand	websites that	and that those	than others and	online are better
led		that I can find	where I can play	websites have	more reliable. I	than others and
Knowledge		information	games or find	owners that own	can identify the	more reliable. I
조		from different	information that	the information on	owner of online	can identify the
		places on the	helps with my	them	information and	owner of online
		internet	learning		cross check this	information and
					against offline	cross check this
					information	against offline
						information
	I can recognise	I can	I can add websites	I can add websites	I can talk about	I can talk about
<u>s</u>	age-appropriate	recognise age-	to a favourites list	to a favourites list	the way search	the way search
Skills	websites	appropriate			results are	results are
0,		websites			selected and	selected and
					ranked	ranked

Knowledge	I know and recognise websites that help me to learn such as 'Numberblocks' and 'Teach your monsterto read'	I know and recognise websites that help me to learn such as Purple Mash	I know, with help, how to create a favourites list on the internet	With increasing confidence, I know how to create a favourites list on the internet	I am beginning to know that visitors/clicks on a page creates a footprint and that the number of subscribers to a page (on YouTube for example) can effect search results and how they are ranked on the page	With greater confidence, I know that visitors/clicks on a page creates a footprint and that the number of subscribers to a page (on YouTube for example) can effect search results and how they are ranked
					on the page	they are ranked on the page
Skills	I can use safe search filters	I can use safe search filters	I can use search tools to find and use an appropriate website and content	I can use search tools to find and use an appropriate website and content	I can check the reliability of a website, including the photos on a website	I can check the reliability of a website, including the photos on a website

	I know that I am	I know that I	I know how to use	I know how to use	I am beginning	With a greater
	safe searching on	am safe	simple search	search tools to find	to know that I	degree of
	the internet if I	searching on	tools to find	appropriate	need to check	confidence, I
	use Kiddle,	the internet if	appropriate	websites and	the date	know that I need
	Kimages and	I use Kiddle,	websites and	content and I am	information was	to check the date
ge	Kpedia	Kimages and	content	beginning to know	created to	information was
led		Kpedia		how to consider the	establish if it is	created to
Knowledge				reliability of	current enough	establish if it is
Α				information and	and find out the	current enough
				ways it may	author of the	and find out the
				influence me	information to	author of the
					determine if	information to
					they are	determine if they
					credible	are credible

	I can use key	I can use key	I can use	I can use strategies	I can tell you	I can tell you
	vocabulary to	vocabulary to	strategies to	to improve results	about copyright	about copyright
	demonstrate	demonstrate	improve results	when searching	and	and acknowledge
	knowledge and	knowledge	when searching	online	acknowledge	the sources of
	understanding in	and	online		the sources of	information
	this strand: filter,	understanding			information	
	Google, search	in this strand:				
	engine, image,	filter, Google,				
Skills	keyboard, email,	search engine,				
S	internet, subject,	image,				
	address,	keyboard,				
	communicate,	email,				
	sender, safe,	internet,				
	secure	subject,				
		address,				
		communicate,				
		sender, safe,				
		secure				

	I know what	I know what a	I am beginning to	With increased	I am starting to	With a good
	google and	website	know how to	confidence, I know	know that	degree of
	search and	address is and	improve my	how to improve my	copyright is a	confidence, I
ω	internet mean	what 'staying	internet search	internet search	form of	know that
wledge	when taking part	safe' online	results through	results through	protection given	copyright is a
We	in a whole class	means and	using keywords	using keywords and	to the authors	form of
Kno	discussion	that a 'search	and phrases	phrases	of information	protection given
_ ~		engine' helps			created and	to the authors of
		me find			stored online	information
		information				created and
						stored online

	I can use key	I can use key	I can use key	I can use key
	vocabulary to	vocabulary to	vocabulary to	vocabulary to
	demonstrate	demonstrate	demonstrate	demonstrate
	knowledge and	knowledge and	knowledge and	knowledge and
	understanding in	understanding in	understanding	understanding in
	this strand: filter,	this strand: filter,	in this strand:	this strand: world
	Google, search	Google, search	world wide web,	wide web,
	engine, image,	engine, image,	search, search	search, search
	keyboard, email,	keyboard, email,	engine,	engine, advanced
	subject, address,	subject, address,	advanced	search, results,
<u>s</u>	communicate,	communicate,	search, results,	Google, browser,
Skills	sender, safe,	sender, safe,	Google,	terms of use,
	secure, internet,	secure, internet,	browser, terms	bias, authority,
	world wide web,	world wide web,	of use, bias,	citation,
	social media	social media	authority,	plagiarism,
			citation,	source, website,
			plagiarism,	secure, https,
			source, website,	site, domain,
			secure, https,	website, browser,
			site, domain,	address bar
			website,	
			browser,	
			address bar	

Knowledge			I know what filtering means when I am searching online and what an email is and what it is used for	I know what social media and an image is	I know what plagiarism, copyright and an address bar mean	I know what domain, bias and source mean
			Coding and P	rogramming		
Skills	I can give commands one at a time to control direction and movement, including straight, forwards, backwards, turn	I can give commands one at a time to control direction and movement, including straight, forwards, backwards, turn	I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts	I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts	I can use external triggers and infinite loops to demonstrate control	I can use external triggers and infinite loops to demonstrate control

	I know how to	I know how to	I know how to	I know how to solve	I know how to	I know how to
	press buttons on	physically	solve open-ended	open-ended	explore	create a
	a floor robot and	follow and	problems when	problems using a	instructions to	condition-
o	talk about the	give others	using a floor robot	floor robot, Logo	control software	controlled loop to
g	movements it	forward,	and Logo including	and other software	or hardware	add a high degree
Me	makes	backward &	creating simple	using efficient	with an input	of intelligence to
Knowledg		turn	regular polygons,	procedures to	and using 'if'	a program
		instructions	making sounds	create shapes and	and 'then'	
			and planning	letters	commands	
			movements such			
			as a dance			
	I can give a set of	I can control	I can write a	I can write a	I can follow a	I can follow a
	instructions to	the nature of	program, putting	program, putting	sequence of	sequence of
	follow and	events:	commands into a	commands into a	instructions, e.g.	instructions, e.g.
Skills	predict what	repeat, loops,	sequence to	sequence to	in a flowchart	in a flowchart
Sk	will happen	single events	achieve a specific	achieve a specific	and modify a	and modify a
		and add and	outcome	outcome	flowchart using	flowchart using
		delete			symbols	symbols
		features				

	I know how to	I know how to	I know how to	I know how to	I know how to	I know how to
	physically follow	plan and enter	explore outcomes	create and edit	write down the	Write a program
	and give others	a sequence of	when giving	procedures typing	steps required	which follows an
е	instructions to	instructions to	sequences of	logo commands	(an algorithm)	algorithm to
Knowledge	move around	achieve an	instructions when	including pen up,	to achieve a	achieve a
Wle		algorithm,	using a piece of	pen down &	desired	planned outcome
		with a robot,	software	changing the trail of	outcome and	for appropriate
		specifying		the turtle for	refer to this	programming
		distance and		example	when	software
		turn and			programming	
		drawing a trail				
		I can give a set	I can give a set of	I can give a set of	I can use	I can use
<u>S</u>		of instructions	instructions to	instructions to	conditional	conditional
Skills		to follow and	follow and predict	follow and predict	statements and	statements and
0,		predict what	what will happen	what will happen	edit variables	edit variables
		will happen				
		I know how to	I know how to	I know how to use	I know how to	I know how to
		explore	plan and enter a	sensors to 'trigger'	refine	create
e		outcomes	sequence of	an action such as	procedures to	statements and
		when giving	instructions on a	turning the lights	improve	variables to
M		instructions in	robot specifying	on using Probot if it	efficiency	provide a
Knowledge		a simple Logo	distance and turn	'goes through a		score/trigger an
		program	to achieve specific	tunnel', or		action in a game
			outcomes	reversing if it		
				touches something		

Skills	ge thei sequer comma	nce of needs to be	program and	I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write	I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program
				a program	1 0
	I know	how to I know how to t	test I know how to	I know how to	I know how to
	identif	y where and improve /	begin to correct	identify	create and then
l e	improv	vements debug	errors (debug) as I	difficulties and	edit a program
gpa	can be	made programmed	program devices	articulate a	linking the
Knowledge	after to	esting, sequences	and actions on	solution for	changes required
(no	execut	e and	screen, and I know	errors in a	to solve a
_ 	debug	any	how to identify	program	problem to the
	proble	ms	bugs in programs		original algorithm
	found		written by others.		

Knowledge	I know how to use the word debug to correct any mistakes when programming a floor robot	create an algorithm to tell a joke or a simple story	I know how to use an algorithm to sequence more complex programming into order	I know how to design my own game including sprites, backgrounds, scoring and/or timers and test and re-test (debug) until it	I know how to write a program which follows an algorithm to solve a problem for a floor robot or other model and test and debug where
				(debug) until it	bug where
				is working as	necessary
				expected	

I can use key I can use key I can use key I can use key vocabulary to vocabulary to vocabulary to vocabulary to demonstrate demonstrate demonstrate demonstrate knowledge and knowledge and knowledge and knowledge and understanding understanding in understanding in understanding in this strand: this strand: in this strand: this strand: flowchart. flowchart. decompose, decompose, decomposing, decomposing, algorithm, algorithm, logical sequence, logical sequence, control, output, control, output, flowchart, sprite, flowchart, sprite, symbol, start, symbol, start, block, command, block, command, stop, delay, stop, delay, algorithm, answer, algorithm, answer, process, decision, process, Skills decision, loop, loop, backdrop, correct, errors, correct, errors, program, program, algorithm, backdrop, script, script, block, algorithm, instructions, block, repeat, repeat, commands, instructions, commentary, commentary, forward (fd), left commands, sequence, sequence, forward (fd), left (lt), right (rt), move, consequence, consequence, (lt), right (rt), turn, clear screen debug, program, debug, program, move, turn, clear (cs), variable Kodu, world, Kodu, world, screen (cs), object, tool object, tool variable palette, palette, program environment, program environment, smooth, flatten, smooth, flatten, raise raise

Knowledge			I know how to explain to others what an algorithm is	I know how to begin to use programming terms when discussing/explainin g my work	I know, with increasing confidence, the meaning of more complex programming terms	I know how to record in detail advanced and complex programming terms
			Online	<u>.</u>		
	I can identify	I can identify	I can reflect on	I can reflect on	I can protect	I can protect their
<u>S</u>	what things	what things	their own digital	their own digital	their password	password and
Skills	count as personal	count as	footprint and	footprint and	and other	other personal
0,	information	personal	behaviour online	behaviour online	personal	information
		information			information	
	I am starting to	With	I know how to	I know how to	I know why I	With a high
	know what is	increased	contribute to a	contribute to a	should not share	degree of
	appropriate and	confidence, I	class blog to share	class blog and can	personal	confidence, I
	inappropriate	know what is	information and I	confidently explain	information and	know why I
	behaviour on the	appropriate	understand who	how the	passwords. I	should not share
ge	internet	and	can see it, and	information is	understand	personal
/lec		inappropriate	how to	shared and who can	what GDPR is.	information and
Knowledge		behaviour on	communicate	see it. I know how		passwords. I
조		the internet	safely and	to communicate		understand what
			respectfully	online safely and		GDPR is.
				understand the		
				repercussions of		
				not being respectful		
				online		

	I can agree and	I can agree	I can identify what	I can identify what	I can be a good	I can be a good
	follow sensible	and follow	is appropriate and	is appropriate and	online citizen	online citizen and
	online safety	sensible	inappropriate	inappropriate	and friend	friend
	rules, e.g. taking	online safety	behaviour on the	behaviour on the		
S	pictures, sharing	rules, e.g.	internet,	internet,		
Skills	information,	taking	recognising the	recognising the		
0,	storing	pictures,	term cyberbullying	term cyberbullying		
	passwords	sharing				
		information,				
		storing				
		passwords				
	I know that I	I know that if I	I know and can	I know and can	I know how to	I know I am a
	need to follow	put	explain to others	confidently explain	behave	good role model
	certain rules to	information	what cyberbullying	to others what	responsibly	for younger
	remain safe when	online it	is and what I need	cyberbullying is and	online and what	pupils
به	visiting places	leaves a	to do when I	make judgements	the likely	
Knowledge	online.	digital	encounter it	to keep myself and	consequences of	
$\frac{8}{9}$		footprint or		others safe online	my actions	
(no		"trail" and I			would be if I was	
		need to		I know how to	not well-	
		manage it so		recognise online	behaved online	
		it is not		behaviours that are		
		hurtful to		unfair		
		others				

Skills	I can seek help from an adult when they see something that is unexpected or worrying	I can seek help from an adult when they see something that is unexpected or worrying	I can agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords	I can agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords	I can judge what sort of privacy settings might be relevant to reducing different risks	I can judge what sort of privacy settings might be relevant to reducing different risks
Knowledge	I know that many websites ask for information that is private but if I am unsure, I know how to responsibly handle such requests and who to talk to about any concerns I have	I know I need to follow certain rules to remain safe when visiting places online and I know that if I am worried or unsure I must tell someone.	I know how to sensibly follow e- safety rules for the classroom	I know I need to think before sending attachments or commenting on an online post and recognise the consequences of my actions.	I know who can and cannot see my information on the variety of online platforms I use.	I know how to protect devices from virus threats

Skills	I can demonstrate how to safely open and close applications and log on and log off from websites	I can demonstrate how to safely open and close applications and log on and log off from websites	I can seek help from an adult when they see something that is unexpected or worrying	I can seek help from an adult when they see something that is unexpected or worrying	from an adult when they see something that is unexpected or worrying	I can seek help from an adult when they see something that is unexpected or worrying
Knowledge	I know how to load and play appropriate games on the internet and how to close them down when I have finished playing	I know how email can be used to communicate with real people within my school, family and community	I know what actions can be taken if I am uncomfortable or upset online e.g. Report Abuse button	I know how to identify dangers when presented with online scenarios, social networking profiles etc. and in these situations I know I must tell an adult when something worries me online	I know the importance of keeping an adult informed about what I am doing online, and how to report concerns	I know that I can report anything that is worrying me online to an adult and /or Childline and that I can access: https://www.ceop.police.uk/ceop-reporting/ to report suspicious and concerning online activity too

					1	1
	I can use key	I can use key	I can demonstrate	I can demonstrate	I can discuss	I can discuss
	vocabulary to	vocabulary to	understanding of	understanding of	scenarios	scenarios
	demonstrate	demonstrate	age-appropriate	age-appropriate	involving online	involving online
	knowledge and	knowledge	websites and	websites and	risk	risk
	understanding in	and	adverts	adverts		
	this strand: safe,	understanding				
	meet, accept,	in this strand:				
	reliable, tell,	safe, meet,				
	online, trusted,	accept,				
<u>s</u>	adult,	reliable, tell,				
Skills	information,	online,				
	safety, personal,	trusted, adult,				
	key, question,	information,				
	tell, safe, share,	safety,				
	stranger, danger,	personal, key,				
	internet	question, tell,				
		safe, share,				
		stranger,				
		danger,				
		internet				

	I know about	I know that	I can talk about	I know why there	I know what the	I know, through
	good and bad	many	what games I	are age restrictions	risks are to	online safety
	choices when	websites ask	enjoy playing and	in place for certain	myself when	training, what the
	using websites –	for	what good choices	games and what	sending	variety of online
	being kind, telling	information	are when playing	the age restrictions	messages via	risks are and how
ge	a grown up if	that is private	games e.g. content	are. I know the	email or in a	to protect myself
led	something upsets	and I am	and screen time	difference between	chatroom,	from them and
Knowled	me and keeping	beginning to		an appropriate and	particularly if	can confidently
	myself safe by	confidently		an inappropriate	they are to	discuss my own
	keeping	and		website.	people I have	personal use of
	information	responsibly			not met	the internet and
	private	handle such				the choices I
		requests				make to keep
						myself safe

	I can use key	I can use key	I can use key	I can use key
	vocabulary to	vocabulary to	vocabulary to	vocabulary to
	demonstrate	demonstrate	demonstrate	demonstrate
	knowledge and	knowledge and	knowledge and	knowledge and
	understanding in	understanding in	understanding	understanding in
	this strand: safe,	this strand: safe,	in this strand:	this strand: spam,
	meet, accept,	meet, accept,	spam, link,	link, privacy,
	reliable, tell,	reliable, tell, online,	privacy, virus,	virus, scam,
	online, trusted,	trusted, adult,	scam, phishing,	phishing, inbox,
	adult, information,	information, safety,	inbox, junk,	junk, sender,
Skills	safety, personal,	personal, internet,	sender, subject,	subject, secure,
S	internet, world	world wide web,	secure, safe,	safe, account,
	wide web,	communicate,	account, online,	online, private,
	communicate,	message, social	private, social	social media,
	message, social	media, email,	media, adverts,	adverts,
	media, email,	password,	cyberbullying,	cyberbullying,
	password,	cyberbullying/bullyi	reporting,	reporting,
	cyberbullying/bull	ng, plagiarism,	anonymous,	anonymous,
	ying, plagiarism,	profiles, account,	victim,	victim, fraud/
	profiles, account,	private, public	fraud/fraudulen	fraudulent,
	private, public		t, policy,	policy, private/
			private/personal	personal

		1	I know what a	I know what to do	I know what to	I know with
		1	password is and	to keep myself safe	do to keep	confidence what
		H	how to choose a	online and what the	myself safe	to do to keep
		9	secure password	consequences will	online and what	myself safe
		f	for age-	be if I don't.	the	online and what
		a	appropriate		consequences	the
		\	websites		will be if I don't.	consequences
						will be if I don't.
ge					I know what	
Knowledge					agencies and	I know what
MC					adults I can	agencies and
Kn					speak to about	adults I can speak
					online abuse	to about online
						abuse
					I know what	
					information I	I know what
					need to keep	information I
					private and how	need to keep
					to do so	private and how
						to do so