

Skills Progression for Computing

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Information	Can use a mouse, finger etc. to	Can use some software to create	Can use software to create and	Can use software to create and	Can use software	Can use software effectively
Technology	select & move items on the	/ assemble digital content for	combine content (be it text,	combine content (be it text,	effectively to create,	to create, design and
,	screen, assembling or matching	clear purpose, (could be text,	pictures / images, graphs,	pictures / images, graphs,	design and manipulate for	manipulate for purposeful
Focus on:	objects.	images, animation, graph, sound,	animation, podcast etc.,) for	animation, podcast etc.,) for	purposeful outcomes, such	outcomes, such as DT, art or
Text, animation, music	(use correct terminology and	etc.) (j2branch, word processing	meaningful purpose(s).	meaningful purpose(s). (Windows	as DT, art or music	music projects
graphics	key vocabulary of identifying	software, publisher, JIT, j2webby)	(Windows Moviemaker,	Moviemaker, animation software	projects.	(animation software options,
	parts of the computer)		animation software options,	options, 2paint, paint)	(j2e5, j2webby)	j2e5, j2webby)
data handling		Can make straight-forward edits	2paint, paint)			
	Can take a digital picture or	of their digital work (text, image,		Can also edit and amend their	Can combine resources	Can combine resources from
	video clip, or record a sound,	sound etc.,) using simple editing	Can make straight-forward edits	digital work (text, image, sound	from different sources into	different sources into a
KS1	as part of a task.	tools, to correct or improve it.	of their digital work (text, image,	etc.,) using simple editing tools, to	a digital presentation,	digital presentation, evaluate
- Use technology	(JIT, Painting & drawing	(appropriate websites on	sound etc.,) using simple editing	both correct and improve it.	showing clear sense of	it, and show clearly intended
purposefully to create,	software, Busy things)	computers/tablets and apps on	tools, to both correct and improve it.(Windows	(Windows Moviemaker, animation	intended purpose and 'audience'.	purpose and 'audience'
organise, store,	Can use some software to	ipads)	Moviemaker, animation software	software options, 2paint, paint)	(animation software	(animation software options, presentation software, j2e5,
, ,	create / assemble digital	Can navigate their way within	options, 2paint, paint)	Can create and amend a multi-	options, presentation	j2webby)
<i>manipulate</i> and	content for clear purpose,	some straight-forward digital	options, zpaint, paint)	media resource that shows a sense	software)	J2Webby)
<i>retrieve</i> digital content.	(could be text, images,	content, such as selected history	Can create and amend a (multi-	of 'audience'. (Windows	301tWalc)	
	animation, graph, sound, etc.)	content, to find some specific	media) resource that shows a	Moviemaker, animation software	Can find specific and valid	Can be discerning and find
KS2	(JIT, Painting & drawing	information.(appropriate	sense of 'audience'. (Windows	options, presentation software,	information (i.e. be	valid information using
- Use <i>search</i>	software, Busy things)	websites on computers/tablets	Moviemaker, animation software	2paint, paint)	discerning) using sensible	sensible key words / search
technologies	, , , , ,	and apps on ipads)	options, 2paint, paint, j2e5,		key words / search terms,	terms, from a range of online
effectively.	Can make straight-forward		j2webby)	Can navigate their way within range	from (selected) online web	web content, as fits the task.
- Select, use and	edits of their digital work (text,	Can create and amend a (multi-		of (selected) online content, to find	content, as fits the task.	(appropriate websites on
combine a variety of	image, sound etc.,) using	media) resource for a clear	Can navigate their way within	specific information.(appropriate	(appropriate websites on	computers/tablets and apps
software (including	simple editing tools, to correct	purpose, starting to show a sense	some straight-forward digital	websites on computers/tablets and	computers/tablets and	on ipads)
, ,	or improve it.	of the 'audience'. j2branch, word	content, such as selected history	apps on ipads)	apps on ipads)	
internet services) on a	(JIT, Painting & drawing	processing software, publisher,	content, to find some specific			
range of digital devices	software, Busy things)	JIT, j2webby)	information. (appropriate	Can include some information /	Can (collect), analyse and	Can (collect), analyse,
to design and create a			websites on computers/tablets	content from an online resource	draw conclusions from	evaluate and draw
range of programs,	Can access a resource and then	Can create & store some data,	and apps on ipads)	within a 'presentation'.	data, (such as through	conclusions from data, such
systems and content	find answers to straight-	(simple data file), and then find		(appropriate websites on	data logging or a survey or	as through survey, database
that accomplish given	forward questions.	answers to straight-forward	Can create & store some data,	computers/tablets and apps on	a prepared database or	or spreadsheet, etc.
goals, including	(appropriate websites on	questions. (2investigate, J2 data,	(simple data file), and then find	ipads)	through manipulating a	MS excel
collecting, analysing,	computers/tablets and apps on ipads)	JIT, J2vote)	answers to straight-forward questions. (appropriate websites	Can use a data file to find answers	spreadsheet, etc). MS excel	
<i>evaluating</i> and	ipaus)	Can recognise and talk about	on computers/tablets and apps	to straight-forward questions, (such	IVIS excel	Can save and retrieve work
presenting data and	Can recognise and talk about	some common uses of IT in the	on ipads)	as through data logging or a survey	Can save and retrieve work	from various electronic
information.	some common uses of IT in the	world around them.(unplugged)	on ipadoj	or a prepared database or a simple	from various electronic	folders on network (and
,	world around them.	around them(anpid66cd)	Can recognise and talk about	spreadsheet, etc). (j2 vote, j2data	folders on network (and	controlled online
	(unplugged)		some common uses of ICT in the	Ms excel, j2investigate)	controlled online	environments where
	(F - 00 /	Can save and retrieve work (and	world around them. (unplugged)		environments where	relevant). (computer Login
	Can save and retrieve some	print if appropriate to	. (- 1- 138-4)	Can save and retrieve work from	relevant). (computer Login	and program access)
	work (and print if appropriate	task) (review the icon/symbol for	Can save and retrieve work from	electronic folders (and print if	and program access)	, , ,
	to task). (review the	'save' on apps or programs used)	electronic folders (and print if	appropriate to task). (computer	,	
	icon/symbol for 'save' on apps		appropriate to task). (computer	Login and program access)		
	or programs used)		Login and program access)			

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Computer Science	Can give simple instructions to	Can give a set of simple	Demonstrates logical 'trial and	Demonstrates logical choices and	Can test, debug and edit a	Can test, debug and edit a
Focus: Programming	control a device, like a 'floor'	instructions to program (control)	error' when using a computer	prediction when using a computer	program that	program that accomplishes a
0	robot, or on-screen object.	a device, like a 'floor' robot, or	simulation, 'model' or game, and	simulation, 'model' or game and	accomplishes a given goal,	given goal, (simple computer
KS1	(floor robots, iboard, JIT,	on-screen object. (unplugged,	predicts some consequences of	can make simple edits to solve a	(simple computer 'game'	'game' or model or
	Tynker)	floor robot, JIT, Busy Things)	decisions/choices made. (J2code,	problem. (j2 code, scratch, Kodu,	or model or simulation), to	simulation), to solve a
- Understand what			Kodu, floor robots)	Barefoot resources)	solve a problem. (Scratch,	problem. (Scratch, mBot
algorithms are; how they	Construction of a construction	Control de la co		Considerable and address	mBot robots, Makeblock	robots, Makeblock software,
are implemented as	Can use trial and error to	Can use trial and error to produce an accurate set of	Can produce an accurate set of simple instructions (code), to	Can produce, debug and edit an accurate sequence of instructions,	software, Codebug hardware & software, BBC	Codebug hardware & software, BBC bitesize,
programs on digital	produce an accurate set of simple instructions, to control	'instructions' to control a floor	program (control) an on-screen	include use of repeat, to control	bitesize, Barefoot	Barefoot computing)
devices; and that	a floor 'robot' or on-screen	'robot' or on-screen object;	object (or floor 'robot'), using	on-screen objects. (j2 code, scratch,	computing)	Bareroot computing)
programs execute by	object.(floor robots, iboard, JIT,	refine (de-bug) and improve /	trial and error to debug.(J2code,	Kodu, Barefoot resources)	computing)	Can create & develop
following precise and	Tynker)	make changes. (unplugged, floor	Kodu, floor robots)	,,	Can create an accurate	programs, by planning,
unambiguous instructions.	,	robot, JIT, Busy Things)	,	Can plan and create a program	program to accomplish a	debugging and applying
				using decomposition; includes the	given goal, including the	programming skills of
- <i>Create</i> and <i>debug</i> simple	Can name some digital devices	Can talk about some electronic	Can also talk about how the	use of selection (IF/ELSE) and/or	use of repetition (loops),	repetition (loops), selection
programs.	that need precise instructions	devices and understands that	sequence of events in some	variables. (j2 code, scratch, Kodu,	selection (IF/ELSE) and	(IF/ELSE) and variables, to
 Use logical reasoning to predict the behaviour of 	(algorithms) to work / be	they need precise instructions	simple instructions (algorithms)	Barefoot resources)	variables. (j2 code,scratch,	accomplish specific goals. (j2
simple programs.	controlled. (unplugged, iboard,	(algorithms) to work / be	or code are 'working'. (J2code,		barefoot computing)	code,scratch, barefoot
simple programs.	busy things, JIT)	programmed (controlled).	Kodu, floor robots)			computing)
1460		(unplugged, floor robot, JIT, Busy		Con tally also at different toward of	Can use logical reasoning	Commenter to the control of the cont
<u>KS2</u>	Understands that software	Things)	Can talk about some digital	Can talk about different types of input options e.g. motion /touch,	to deconstruct programs, evaluate their	Can use logical reasoning to deconstruct programs,
 Design, write and debug 	may represent a fantasy	Demonstrates logical 'trial and	devices beyond school, that need	microphone, data logging sensor;	effectiveness and make	evaluate their effectiveness
programs that	situation and can make	error' when using a computer	precise instructions (algorithms)	and output options e.g. switch,	them more challenging	and make them more
accomplish specific goals,	sensible (logical)	simulation or game, and predicts	to work / be programmed	speakers, screen, etc. (appropriate	and / or 'elegant' /	challenging and / or 'elegant'
including <i>controlling</i> or	decisions/choices when	the consequences of	(controlled). (appropriate	terminology, unplugged, everyday	efficient. (Scratch, mBot	/ efficient.(Scratch, mBot
<i>simulating</i> physical	'playing' a straight-forward	decisions/choices made.	terminology, unplugged,	devices)	robots, Makeblock	robots, Makeblock software,
systems; solve problems	'game'. (unplugged, iboard,	(unplugged, floor robot, JIT, Busy	everyday devices)	,	software, Codebug	Codebug hardware &
by <i>decomposing</i> them	busy things, JIT)	Things)		Developing and using a wider	hardware & software, BBC	software, BBC bitesize,
into smaller parts.			Knows some relevant computing	computing 'vocabulary' relevant to	bitesize, Barefoot	Barefoot computing)
Use sequence , selection ,	Understands some basic	Understands some basic	terms such as computer network,	work, such as de-bug, Apps, data	computing)	
and <i>repetition</i> in	computing terms and	computing terms and concepts,	Internet, algorithm, program,	logging, search engine, spam, Wiki,		
programs; work with	concepts, such as algorithm,	such as: (school) network,	World Wide Web, website, etc.	etc. (appropriate terminology,	Can use different types of	Can use different types of
variables and various	program, sequence, etc.	algorithm, program, debug,	(appropriate terminology,	unplugged, everyday devices)	input options and output	input options and output
forms of input and	(unplugged, iboard, busy	editing, website, etc.	unplugged, everyday devices)		options such as through	options such as through
output.	things, JIT)	(unplugged, floor robot, JIT, Busy			sensing and control 'kits' and/or software, to solve a	sensing and control 'kits' and/or software to solve a
- Use logical reasoning to		Things)			problem. (cookIT	problem. (j2code, scratch)
explain how some simple					problem. (cookii	problem. (jzcode, scratch)
algorithms work and					Has an understanding of	Has an understanding of
detect and correct errors					computer networks (local,	computer networks (local,
in algorithms and					internet services and	internet services and WWW).
programs.					WWW).(search engines)	(search engines)
- Understand <i>computer</i>					,	
<i>networks</i> including the					Developing and using a	Developing and using a wider
internet; how they can					wider computing	computing 'vocabulary' in
provide multiple					'vocabulary' in context of	context of task, such as
services, such as the					task, such as search	search engine, URL, HTML,
World Wide Web.					engine, URL, variable,	https, variable, validate,
					validate, digital footprint,	digital footprint, etc.
					spam, Wiki,	

- Appreciate how [search]					etc.(terminology, BBC	(terminology, BBC bitesize,
results are selected and					bitesize, barefoot	barefoot computing)
ranked.					computing)	
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Digital Literacy	Knows about the Internet	Can talk about key online	Can talk about key online	Can talk about key online safety	Can talk about key	Can demonstrate 'web-
	and beginning to	safety 'rules' and knows	safety 'rules' and knows	'rules', knows what may be	online safety 'rules',	savvy' awareness, from a
Focus: Online safety,	understand some key, age	where to go / report if a	where to go / report if a	unacceptable behaviour, and	knows what may be	range of given scenarios,
sharing information	appropriate safety 'rules'.	problem. (unplugged,	problem. (unplugged,	knows where to go / report if a	unacceptable	including conduct,
	(Childnet resource, BBC	internet scenario cards, PSHE	internet scenario cards, PSHE	problem. (unplugged, internet	behaviour, and knows	contact and content
<u>KS1</u>	bitesize)	powerpoints, 3BM SoW)	powerpoints, 3BM SoW, BBC	scenario cards, PSHE	where to go / report if a	'risks' and issues. (j2e5,
- Recognise common			video)	powerpoints, 3BM SoW, BBC	problem. (cybersafe,	presentation software,
uses of information	Can share some	Can create and share some		video)	various identified	thinkuknow, kidsmart)
technology beyond	information with others,	information online, (such as	Can create and share some		websites, internet	
school.	(such as via school network,	in school MLE, 'closed' email	information online (such as in	Can create and share some	scenario cards)	Can discuss range of
- Use technology safely	in school MLE, via a 'closed'	system or blog),	school MLE, email/blog),	information online (such as		eSafety and eSecurity
and respectfully,	blog).(JIT J2webby)	understanding need to be	understanding need to be	school MLE, email / blog),		(privacy) issues and
keeping <i>personal</i>	Confind constant	respectful and safe. (child	respectful and safe. (LGfL	demonstrating need to be	Can demonstrate 'web-	knows range of ways to
information private;	Can find some straight-	friendly search engines, JIT or	cyberpass, j2e5, bbc bitesize)	respectful and safe. (LGfL	savvy' awareness, from	report concerns or
identify where to go for	forward information from a	2publish, presentation	Con final consentations	cyberpass, j2e5, j2webby)	a range of given	inappropriate
help and support when	'safe', selected online	software)	Can find some straight-	Can find studielst famous und	scenarios, including	behaviour.(j2e5,
they have concerns	resource. (Childnet	Con final come atmaight	forward information from	Can find straight-forward	conduct, contact and	presentation software,
about <i>content</i> or	resource, BBC bitesize)	Can find some straight- forward information from	(selected) website resource(s) and knows not all	information from (selected) website resource(s) and knows	content 'risks' and issues.(j2e5,	thinkuknow, kidsmart)
contact on the internet		(selected) website	websites 'good to use'. (any	sites can contain, true or false	presentation software,	Can communicate and
or other online		resource(s) and knows not all	child friendly search engines)	facts, or opinion. (j2e5,	thinkuknow, kidsmart)	collaborate online (such
technologies.		websites 'good to use'. (any	child mendiy search engines)	j2webby, pupil email,	thinkuknow, kidsmart)	as in MLE blog/Wiki
KS2		child friendly search engines)		unplugged, internet scenario	Can communicate and	/forum), demonstrating
				cards)	collaborate online (such	respectful and safe
- Understand the					as in MLE blog/Wiki	behaviours. j2e5,
opportunities					/forum), demonstrating	presentation software)
[networks] offer for					respectful and safe	
communication and					behaviours. (j2e5,	Can check the results of
collaboration.					presentation software)	web searches i.e. how
- Be concerning in						useful, relevant,
evaluating digital					Understands some	reasonable, valid,
content Use technology safely,					simple steps to	accurate, and appreciates
respectfully and					'validate' information	how search results are
respectfully and responsibly; recognise					found on the Web, and	selected & ranked.
acceptable/unacceptabl					appreciates how search	(various identified
e behaviour; identify a					results are selected and	websites)
range of ways to report					ranked. (unplugged)	
concerns about content						
and contact.						
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