Finlay Community School

Computing

Our Whole School Curriculum Intent

At Finlay, we aim to teach a broad and balanced curriculum that enables children to enjoy, achieve and succeed in line with the National Curriculum. We provide opportunities to develop the children's cultural capital and ensure they are life-long learners, who are ready for the next step of the education and to thrive in Society. In addition to teaching the National Curriculum, we also aim for our children to leave school with a SMILE! Our SMILE values are: social awareness, mental health and wellbeing, independence, life skills and excellent aspirations. We provide opportunities to develop these values in all curriculum areas.

Our Computing Intent

At Finlay, we teach the National Curriculum. At Finlay, we understand that it is important for our pupils to continuously develop their skills within Computing, as they are living in a digitally advancing world, and many of the jobs they will go on to apply for in later life will require secure skills in Computing, with an increasing focus on computer science and coding. The National Curriculum mentions that, "a high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world."



Computing Coverage Term by Term (EYFS – Year 6)

	Autum	n Term	Spring	j Term	Sum	mer Term	
	Autumr I	Autumn 2	Spring I	Spring 2	Summer I	Summer 2	
Reception	It's Good to be Me	Let's Celebrate	I wonder: What il's like in space? What il's like in Australia? What il's like in Antarctica?	I wonder: What materials are waterproof? What the weather is like in each season? What it is like at The Farm?	Once Upon a Time Moving on up!		
Camputing Unit	Interact and explore their environment using a range of multimedia equipment, including digital cameras, video cameras, microscopes etc. This could also include the use of tablets e.g. iPad to capture still	Explore a teacher-selected website to find a desired page, using hyperlinks and navigation buttons	Collect information, e.g., by taking photographs or collecting object. Use ICT to sort and sequence objects on a screen or interactive whiteboard.	Explores a computer / laptop using the keyboard and mouse.	Can use a simple programme such as paint to draw a picture	Interact and explore their environment using a range of multimedia equipment, including digital cameras, video cameras, microscopes etc. This could also include the use of tablets e.g. iPad to capture still and moving image	

	and moving image							
Year I	Finlay To	y Factory	Where oh Where	e is Finlay Bear	The Grec	The Great Space Race		
Camputing Unit	I.I: We are treasure hunters	I.2: We are TV chefs Information	1.3: We are digital artists Information	1.4: We are publishers Information Technology	1.5: We are rhythmic Information	1.6: We are detectives Information		
	Computer science	Digital Literacy Computer science	Technology Digital Literacy	Literacy	Technology Digital Literacy	Technology Digital Literacy		
Year 2	The Great Fire The T	of London & udors	Around the Wa Passpo	orld in Days rt theme	Heroes in History Florence Nightingale and Mary Seacole			
Camputing Unit	2.1: We are astronauts	2.2: We are game testers	2.3: We are photographers	2.4: We are safe researchers	2.5: We are animators	2.6: We are zoologists		
	Computer science	Computer science	Computer science Information	Information Techrology Digital	Information Techrology Digital	Information Technology Digital Literacy		
	Digital Literacy	Digital Literacy	Technology Digital Literacy	Literacy	Literacy			
Year 3	Rock a Stone Age a	rd Roll! nd Iron Age	Deadly I	Disasters	Navigat Ancien	ting the Nile/ t Egyptians		
Computing Unit	3.1: We are programmers	3.2: We are bug fixers	3.4: We are who we are	3.3: We are presenters	3.5: We are co-authors	3.6: We are opinion pollsters Computer science		

	Computer science	Computer science	Information Technology Digital Literacy	Irformation Technology Digital Literacy	Computer science Information Technology Digital Literacy	Information Technology Digital Literacy	
Year 4	Rotten	Romans	Journey to t	he River Sea!	Ancient Greeks		
	Glorious Glevim		Come Sail with Me!		Oly	impics	
Computing Unit	4.1: We are software developers	4.3: We are musicians	4.5: We are artists	4.4: We are bloggers	4.6: We are meteorologists	4.2: We are makers	
	Computer science	Computer science Information Techrology Digital Literacy	Information Technology	Computer science Information Technology Digital Literacy	Computer science Information Technology Digital Literacy	Computer science	
Year 5	Invaders o	ind Settlers -	Defore	station	Cho	colate!	
	Saxons, Viking	js and Mayans	The Rainfores	t – North and	Ancient Mc	iya and Aztec	
			South ,	America	Civi	lisation	
Computing Unit	5.1: We are game developers Computer science	5.2: We are cryptographers Camputer science	5.3: We are architects Computer science Information Technology	5.4: We are web developers Computer science Information	5.5: We are adventure gamers Information Technology Digital Literacy	5.6: We are VR designers Computer science Information Technology	

			Digital Literacu	Digital Literacu			
			0	0			
Year 6	We'll Me	et Again!	Ice Ex	cplorer	Let Me End	tertain You!	
	World War 2		Arctic and Antarctica		History of Entertainment		
Computing Unit	6.1: We are	6.2: We are	6.3: We are	6.4: We are	6.5: We are	6.6: We are AI	
	toy makers	computational	publishers	connected	advertisers	developers	
		thinkers					
	Computer		Computer	Computer	Information	Computer science	
	science	Computer	science	science	Technology	Information	
		science	Information	Information	Digital Literacy	Technology	
			Technology	Technology			
			Digital	Digital			
			Literacy	Literacy			

Progression of Knowledge, Skills and Understanding in the National Curriculum

Computer Science – Problem Solving

	Birth	Three to	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	ta	Four	'						
	Three	Year							
	V								
	Tear	Oias							
	Olds								
Problem	I can	Use a		C.I.I.I. Understand	C.2.I.I.	C.3.I.I. Design,	C.4.I.I. Design,	C.5.I.I. Design,	C.6.I.I. Design,
Solving	switch	variety of		what algorithms	Understand what	write and debug	write and debug	write and debug	write and debug
	electronic	electronic		are.	algorithms are.	programs that	programs that	programs that	programs that
	toys on,	toys in		The pupil can	The pupil can	accomplish	accomplish	accomplish specific	accomplish specific
	such as	play		understand	understand	specific goals.	specific goals.	goals	goals.
	a torch	situations,		algorithms as	algorithms as	The pupil can		The pupil can	The pupil can
	or remote	e.g., dance		sequences of	sequences of	design and write	The pupil can	design, write and	design, write and
	control	mats, Bee-		instructions in	instructions or	a program using	design and write	debug a program	debug a program
	car, and	bots, and		everyday contexts.	sets of rules in	a block language,	a program using	using a block	using a second
	know	remote		.	everyday contexts.	without user	a block language	language based on	programming
	how to	control		The pupil can take	T I :1	interaction.	to a given brief,	their own ideas.	language based on
	press	toys, using		real-world	The pupil car		including simple		their own ideas.
	buttons	dinantianal		problems and then	recognise that	A typical program	interaction.	The pupil can	T I II
	or			pian a sequence of		might be a	The numil ear	design a program	The pupil can
	switches	larguage.		these. The problems	instructions of	scripted animation	write a program	of their own and	design a program
	to make	lackwarde		cauld be maxing a	sate al rulas can	for a joke, part of	in Scratch ar	write this in a	of their own and
	something	stan)		Blue-Bat from ane	be thought of as	a story, or unrea	MakeCade (ar	biock-based	write this in a
	happen.	(July)		paint to another	alagrithms	to another area of	similar) in which	Sanglage such as	programming
				ar making some	Examples could	Dragrame cauld	the user has to	schuch. The pupul	than Scratch (ar
				simple load items	include recipes	use pre-built	provide some	debug their cade	whichever
	I can			like a sandwich.	but might also be	enritae ar anae	input. perhaps as	explain what huge	language has
	make			smoothie or	procedures or	designed by the	ar arswer to a	they lound and	formed the locus
	toys,			overnight oats.	rules in class,	pupil. Expect	question on	how they lixed	for their
	such as			U	spelling rules,	programs to	screen, or by	them. The program	programming in
	a wind-			In I.I, recognise a	simple arithmetic	include movement	using key presses	reed not be	other years), such
	up toy,			set of directions as	operations or	and dialogue; they	or the mouse. The	complex but it	as MakeCode. The
	move			an algorithm.	number patterns.	may also include	program could be	should be	second language
				In 1.2, recognise		sound effects and	a simple game or	accomplished with	does not need to
				the steps of a	In 2.1, recognise	some use of	a set of	a degree of	be text based, but
					sets of directions	costumes to allow			Logo or Python

		recipe as an	as algorithms.	for animated	questions and	independent	could be used.
	1	algorithm.	In 2.2, recognise	movement. There	typed responses.	working.	
		Ĩ	that the rules of	may be more than		, i i i i i i i i i i i i i i i i i i i	The pupil can test
		1	a gane are ar	one sprite in the			and debug their
		1	algorithm.	animation.		1	code, explain what
		1	In 2.3, think of				bugs they found
		1	the steps to taking			1	and how they
		1	and editing				lixed these. The
		1	photoaraphs as				program need not
		1	an algorithm.)				he complex.
			····· <i>a</i> ····· <i>a</i>				
		C.I.I.2. Understand	C.2.1.2. The pupil	C.3.1.2.	C.4.1.2.	C.5.I.2.	C.6.I.2.
		how algorithms	car understand	Controlling or	Controlling or	Controlling or	Controlling or
		are implemented as	how algorithms	simulatina	simulatina	simulatina	simulatina
		programs or	are implemented	physical systems.	physical systems.	physical systems.	physical systems.
		diaital devices:	as programs or	The pupil can	The pupil can	The pupil can	The pupil can
		and that programs	diaital devices.	explore	develop their own	an pariment with	design write and
		execute bu	and that	simulations of	simulation of a	computer control	debug a program
		following precise	programs execute	physical systems	simple physical	applications	using a second
		and unampiquous	by following	an screen	sustem an screen		programming
		instructions.	precise and				language based on
		The pupil can	urambiguous	The pupil can			their own ideas
		ne pupu cur	instructions.	experiment with			
		turtles using		same an-screen			The pupil can
		unies using	The pupil can	simulations of			design a program
		sequences of	program on screen	physical sustems			al their own and
			usina sequences.	perhans linked to			write this in a
		inflement an	of instructions to	tanics from other			programming
		Lugorunn.	indement an	curriculum areas			language other
		The suril and	alaorithm.	e a a ball			than Scratch (ar
		ine pupu can	ð	bauncing an a bat			whichever
		(an aimilan)	The pupil can	ar a car mavina			language has
		(or similar)	create programs	around a track			larmed the lacus
		program using a	as sequences of	Manu camputer			lar their
		number of steps in	instructions when	agnes include			programming in
		order defore	programming on	elements of			ather years) such
		pressing the Go	screen. Their	camputer			as MakeCade The
		sutton. The length	program could be	simulations The			second language
		of the pupils	written usina	nunil can discuss			dage not need to
		programs might	simple	what they have			he text based but
		increase over the	programming apps	learned from			Laga ar Puthan
		year.	(such as	using the			could be used
		· · · ·	ScratchJr).	simulation			contact the costert.
		In I.I, create a	perhaps using	Sumuluur.			The nunil can test
		Blue-Bot program,	pre-prepared				and debug their
		implementing the	blacks and				and we have been and a second
		complete algorithm	sprites.				buge they lound
		for their solution.	1				muge wery prise
			•				

		In 2.1, program sprites in ScratchJr to solve the problems given to them. In 2.2, recognise how the Scratch games implement sets of rules.				and how they fixed these. The program need rot be complex.
			C.3.1.3: Solve problems by decomposing them into smaller parts The pupil can plan a project. Warking with the teacher and, perhaps, other pupils, the pupil can develop an outline plan for a project in computing, involving multiple steps and resources, e.g. creating an animation, filming a video or conducting a survey. In video work, the plan might include identifying a subject; storyboarding the video; sourcing media; recording video; filming; editing; exporting.	C.4.1.3. Solve problems by decomposing them into smaller parts. The pupil can work with others to plan a project. Given a particular project, the pupil can work as part of a team to plan how to accomplish their goal, breaking the project down into a set of tasks. Examples of projects could include creating an educational game or monitoring the weather.	C.5.1.3. Solve problems by decomposing them into smaller parts. The pupil can plan a solution to a problem using decomposition. The pupil can take a complex problem, identify component parts, use decomposition to break this problem down and then plan how they can solve the problem by working through the elements they have identified. Projects could include developing a computer game, creating a website or designing a building.	C.6.1.3. Salve problems by decomposing them into smaller parts. The pupil can salve problems using decomposition, tackling each part separately. The pupil can take a complex problem, identify component parts, use decomposition to break this problem down and then plan how they can solve the problem by working through the elements they have identified. they can then use their plan to solve the original problem.

Computer Science – Programming

	Birth to	3-4 Year	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	three	Olds							
	year								
	olds								
Programming		Use a		C.I.2.I. Create	C.2.2.1. Create	C.3.2.1. Use	C.4.2.1. Use	C.5.2.1. Use	C.6.2.1. Use
		variety of		and debug simple	ard debug	sequence,	sequence, selection	sequence, selection,	sequence, selection
		electronic		programs.	simple	selection and	and repetition in	and repetition in	and repetition in
		toys in			programs.	repetition in	programs; work	programs; work	programs; work
		play		The pupil car	The pupil can	programs; work	with variables.	with variables.	with variables.
		situations,		give a sequence	create a simple	with variables.	The pupil can use	The pupil can use	The pupil can
		e.g., sance		of instructions	program on	The pupil can use	sequence and	sequence, selection	solve problems
		hate and		to it fiver turne.	screen,	sequence in	repetition in	and repetition in	using
		remote		The pupil can	correcting any	programs.	programs.	programs.	tachling each part
		control		create a Blue-Bot		In an-screen	The pupil's	The nunil's	separately
		toys, using		program using a	The pupil can	programming. the	program, tupicallu	program tupically	sapari meny.
		basic		sequence of	create a simple	pupil's program	written in Scratch,	written in Scratch,	The pupil can take
		directional		instructions	program on	should include a	or similar, should	or similar, should	a complex
		language.		before running it	screen (e.g.	sequence of	include sequences	include sequences	problem, identify
		(forward,		using the Go	using	commands or	of commands or	of commands or	component parts,
		backwards,		button. The	ScratchJr) with	blocks in an	blocks and some	blocks, some	use decomposition
		stop)		length of the	a particular	appropriate order.	repetition. Repetition	repetition and	to break this
				pupils programs	goal or	A typical program	would typically be	selection. Repetition	problem down and
				hight be expected	purpose in	could be a simple	for a fixed number	might include exit	then plan how
				the course of the	mind (e.g.	scripted	of times, but might	conditions (e.g.	they can solve the
				Hear	moving à sprite	talling g ight	aiso include exit	Selection would	problem by
				· good ·	ta another)	stary ar	repeat until)	narmally be al an	the elements they
				In I.I, give the		explaining an	Programs might	ilthen or	have identified.
				Blue-Bot a	The pupil can	idea taken from	include simple	ifthenelse type.	they can then use
				complete	debug ary	elsewhere on the	music or a simple	Åt this level, expect	their plan to solve
				program.	errors in their	curriculum. The	.game.	the pupil to be able	the original
					own code.	pupil's program		to combine	problem.
						might include		repetition with	
					In 2.1, create	multiple sprites;		selection. Programs	
					their own	instructions could		might include a	
					program for	include movement,		computer game.	
					in Scratch Ir	on-screen text,			
					correcting any	castume changes			
					errors.	manute and upps.			

			C.3.2.2. Wark	C.4.2.2. Work with	C.5.2.2. Work with	C.6.2.2. Work
			with various	various forms of	various forms of	with various
			forms of input	input and output.	input and output.	forms of input
			and output	The pupil can write	The pupil can write	and output.
			The pupil can	a program that	a program that	
			write a program	accepts keyboard	accepts keyboard	The pupil can
			to produce output	input and produces	and mouse input	write a program
			on screen.	on-screen output.	and produces	that accepts
					output on screen	inputs other than
			The pupil can	In Scratch (or	and through	keyboard and
			create a program	similar), the pupil	speakers.	mouse and
			that produces	can write a		produces outputs
			output on screen,	program that	In Scratch (or	other than screen
			such as moving	displays a	similar), the pupil	.or speakers.
			sprites or	question, accepts	can create a	
			displayed text,	typed input and	computer game	
			e.g. a simple	responds in an	using the keyboard	
			animation	appropriate way to	or mouse for input	
			program.	what is typed.	and the screen and	
				This might be used	speakers for	
				as the basis for a	output.	
				dialogue program		
				or a simple maths		
				.game.		

Computer Science – Logical Thinking

	Birth to	Three-	Reception	Year I	Year 2	Year 3	Year 4	Year 5	Year 6
	Three	Four	·						
	Year	Year							
	Olds	Olds							
Logical		Use a		C.1.3.1. Use	C.2.3.1. Use	C.3.3.1. Use	C.4.3.1. Use logical	C.5.3.1. Use	C.6.3.1. Use
Thinking		shortcut		lagical reasoning	logical reasoning	logical reasoning	reasoning to	logical reasoning	logical reasoning
		such as		to predict the	to predict the	to explain how	explain how some	to explain how	to explain how
		an icon		behaviour of	behaviour of	some simple	simple algorithms	some simple	some simple
		or the		simple programs.	simple programs.	algorithms work.	work.	algorithms work.	algorithms work.
		.computer /		The pupil can give	The pupil can	The pupil can	The pupil can	The pupil can	The pupil can give
		iPad to		explanations for	give logical	explain a simple,	explain an	explain a rule-	clear and precise
		navigate		what they think a	explanations for	sequence-based	algorithm using	based algorithm	logical
		to a		program will do.	what they think a	algorithm in their	sequence and	in their own	explanations of a
		specific			program will do.	own words.	repetition in their	words.	number of
		website.		The pupil can			own words.		algorithms.
				explain to the	The pupil can	The pupil can		When provided	
				teacher, and to	give logical	give an	Given an algorithm	with a rule-based	Given an
						explanation for a	, v		

		peers, what they	explanations of	simple algorithm	using both	alaorithm (e.a.	alaorithm. the
		think a program	what a proaram	based on a	sequence and	lor a computer	pupil can describe
		will do. This	will do under	sequence of	repetition, the pupil	game), the pupil	what it does and
		could be a	aiven	instructions. The	can aive a	should be able to	usina loaical
		program they or	circumstances.	algorithm could	coherent. loaicallu	explain what it	reasonina aive
		their peers have	including some	be one of their	reasoned	does and how it	precise
		written or it	attempt at	awn ar a simple	explanation of	works in their	explanations of
		could be a	explaining why it	one with which	what it does and	awn wards	haw it works
		lamiliar piece al	does what it	they have been	haw it works		Algorithms could
		caltware	does The	provided The	Papatitian is likely		ha linkad ta
		(including	nragram cauld be	algorithms could	ta ba 'laravar' ar		ne mikeu w
		(and and a campa	and they have	he recorded	lar a set number		projects but
		The pupil could	written ar it	araphically a a	al times although		might include a
		use an audia	could be a	grup unity, e.g.	and canditians		hay algorithm
		recorder or video	computer game ar	us a surgionia.			key hugo hinaru
		camera ta cantura	a lamiliar piaca		(e.g.		saarch
		their explanations	al caltware The		squid be used		seurch.
		inen explanations.	by supervise. The		contra de lista.		
		In II explain	an audia recardor				
		what their awa	an a widea				
		an another pupil's	camera ta recard				
		or around pupils	their				
		belgra it is rup)	explanations				
		Defore it is run.)	explanations.				
			In 21 dive				
			lagical				
			inguni				
			explanations for				
			which ther own				
			or men peers				
			de In 2 2 aius				
			ao. Ir 2.2, give				
			iogicai				
			explanations for				
			what happens in				
-			the games.	C 2 2 2 11	C / 2 2 //	0 5 2 2 11	0 4 2 2 11
				C.S.S.Z. Use	C.4.5.2. Use	C.S.S.Z. Use	C.0.3.2. Use
				logical reasoning	togical reasoning	logical reasoning	logical reasoning
				to detect and	to detect and	to detect that	to detect and
				correct errors in	correct errors in	correct errors in	correct errors in
				aigorithms and	aigorithms and	aigorithms and	aigorithms and
				programs.	programs.	programs.	programs.
				The pupil can use	The pupil can use	The pupil can use	The pupil can use
				iogical reasoning	iogical reasoning	iogical reasoning	iogical reasoning
				to detect errors in	to detect and	to detect errors in	to detect and
				programs.	correct errors in	algorithms.	correct errors in
					programs.	14.0	algorithms (and
				The pupil can		When given an	programs).

			give well-thought-	The pupil can give	algorithm for a	
			through reasons	well-thought-	particular	When given an
			for errors they	through reasons	, purpose, e.g. a	algorithm for a
			find in programs.	for errors they	rule-based	particular
			Typically, the	find in programs	algorithm for a	purpose, e.g. a
			pupil can find	and explain how	computer game or	rule-based
			errors by	they have fixed	a sequence of	algorithm for a
			reasoning	these. The pupil	steps to draw a	smartphone app,
			logically about	can find and	geometric pattern,	the pupil can use
			the program	correct errors by	the pupil can use	logical reasoning
			code, but they	reasoning logically	logical reasoning	to identify
			might also be	about the program	to identify	possible errors in
			able to use	.code; they might	possible errors in	the algorithm,
			logical reasoning	also be able to use	the algorithm,	explaining why
			to identify errors	logical reasoning	explaining why	they believe the
			in programs	to identify errors	they believe the	algorithm is
			when they are	in programs when	algorithm is	incorrect. The
			executed. The	executed and	incorrect.	pupil can use
			programs do not	confirm that they		logical reasoning
			have to be	have fixed these		to suggest
			written originally	by testing the new		possible
			by the pupil.	version of their		corrections to the
				program. The		algorithm,
				programs do not		explaining why
				have to be written		these would
				originally by the		correct the bug
				pupil.		they identified.

Computer Science – Wider Understanding

	Birth to Three Year Olds	Three to Four Year Olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Wider Understanding			Explores a computer / laptop using the keyboard			C.3.3.3. Understand computer networks including the Internet.	C.4.3.3. Understand computer networks including the Internet.	C.5.3.3. Understand computer networks including the Internet.	C.6.3.3. Understand computer networks including the Internet.
			and mouse.			The pupil can understand that computer networks transmit information in a digital (binary)	The pupil can understand that the Internet transmits information as packets of data.	The pupil car understand how data routing works on the Internet.	The pupil can understand how mobile phone or other networks operate.

			format.			The pupil can give
				When working	The pupil can give	an explanation of
			The pupil car	online, the pupil	a coherent	how networks
			explain that any	can explain that	explanation of	operate: they
			information has to	the information	how data packets	should know that
			be converted to	they send and	are routed from	information is
			numbers before it	receive is	one computer to	transmitted
			can travel through	automaticallu	another on a	digitally and have
			computer networks	braken dawn inta	separate network	60me
			The pupil should	packets of data	which is also	understanding of
			understand that	and that these	connected to the	the network
			this conversion	sametimes take	Internet	tapalagu invalved
			happens according	dillerent routes	17 0007 000.	sopology sorration.
			to an agreed	across the		
			sustan ar cada	Internet		
			system of come.			
		 	C. 3. 4. 1. Understand	C 4 4 I	0.5.4.1	C 6 4 1
			haw networks can	Understand haw	Understand haw	Understand haw
			provide multiple	networks can	networks can	netwarks can
			services such as	pravide multiple	provide multiple	provide multiple
			the Warld Wide Web	services such as	services such as	services such as
				the World Wide	the Warld Wide	the Warld Wide
			The pupil can	Web.	Web.	Web.
			understand that	The pupil can	The pupil can	The pupil can
			email and	understand haw	understand haw	understand how
			videoconferencina	the Internet makes	web pages are	damain names are
			are made possible	the web passible	created and	converted into IP
			through the		transmitted	addresses on the
			Internet.	The pupil can give		Internet
				an explanation of	The pupil can	
			The pupil should	haw requests for	explain how	The pupil can give
			krow that email	web pages and	HTML is used to	some explanation
			messages are sent	the HTML for	create a web page	al haw a domain
			and received	those pages are	and how it is	name is converted
			through servers	transmitted via the	transmitted as	inta an IP address
			connected to the	Internet.	packets of diaital	using the
			Internet. The pupil		data over the	distributed domain
			should know that		Internet. The pupil	rame sustem (DNS)
			other systems also		should have an	usina somethina
			work through the		awareress of	similar to a set of
			Internet, but these		simple HTML taas	phone books. The
			services may be		for marking up a	, pupil should show
			direct, peer-to-peer		web page.	an awareness of
			connections rather		1 0	the looked-up
			than via servers.			addresses (DNS
						records) being
						copied (cached),
						· ·

				and that more
				local records are
				used in preference
				to more
				authoritative
				records in most
				circumstances.

Information Technology – Creating Content

	Birth to	Three to	Reception	Year I	Year 2	Year 3	Year 4	Year 5	Year 6
	Three.	Four							
	Vage	Vega							
	Teur	neur							
	Olds	Olds							
Creating			Collect	C.I.I.I. Use	C.2.1.1. Use	C.3.I.I. Select, use	C.4.1.1. Select, use	C.5.I.I. Select, use	C.6.I.I. Select, use
Content			information,	technology	technology	and combine a	and combine a	and combine a	and combine a
			e.g., by taking	purposefully to	purposefully to	variety of software	variety of	variety of	variety of
			photographs or	organise, store	organise, store	(including Internet	software	software	software
			collecting	and retrieve	and retrieve	services) or a	(including Internet	(including Internet	(including Internet
			conecting	digital content.	digital content.	range of digital	services) on a	services) or a	services) or a
			object.		The pupil can	devices.	range of digital	range of digital	range of digital
				The pupil can use	store, organise	The pupil can use	devices.	devices.	devices.
			Use ICI to sort	digital technology	and retrieve	a range of	The pupil can use	The pupil can use	The pupil can
			and sequence	to store and	content on	programs on a	and combine a	and combine a	select, use and
			objects on a	retrieve content.	digital devices	computer.	range of	range of	combine a range
			screen or		for a given		programs on a	programs on	of programs or
			interactive	The pupil can use	purpose.	The pupil can use	computer.	multiple devices.	multiple devices.
			whiteboard.	a range of digital		a range of			
			Wintebourd.	technologies to	With a given	software on laptop	The pupil can use	The pupil can use	The pupil can
			Conusoo	store and access	purpose, the	or tablet computers	multiple programs	multiple digital	choose for
			Can use a	digital content.	pupil can use a	with some degree	on laptop or	devices (such as	themselves from a
			simple	These might	range of digital	of independence.	tablet computers	tablets and	range of
			programme	include laptop	technologies to	Software might	to achieve	laptops or digital	available
			such as paint to	computers,	retrieve, organise	include video	particular goals.	cameras and	programs on
			draw a picture.	tablets,	and store digital	editing, diagnostic	For example, they	laptops) to	laptops, tablets
				smartphones,	content.	tools, email clients,	might record	achieve particular	or cloud-based
				digital cameras,	Technologies will	videoconferencing	audio and then	goals. The devices	services to
				video cameras	typically include	(with the teacher or	use this as	might include web	achieve particular
				and audio	laptop computers,	another adult),	samples in a	servers, allowing	goals. For
				recorders. Projects	tablets and	survey design	composition;	them to use	example, they
				might include	smartphones	software,	create HTML	cloud-based	might choose
				videoing one	with access to	spreadsheets and	content in a text	applications. For	which image
				another cooking,	the Internet, but	presentation	editor and preview	example, they	editors and
				developing an	the pupil might	software.	it in a browser;	might use local	presentation
				eBook or an	also be expected		analyse data in a	media in	software to use

		audiobook,	to use digital	spreadsheet and	conjunction with	when making a
		creating a	cameras, video	then create a	a cloud-based	presentation;
		greetings card.	cameras and	presentation to	programming	which image and
			audio recorders	show the results	platform, such as	audio editors to
		(E.g. In I.2, film	(or the	of their analysis.	Scratch; digital	use when creating
		and upload a	equivalent apps	· ·	cameras and	media content for
		pupil cooking.	on a tablet or		video cameras to	an app; which
		In 1.3, save their	smartphone).		capture content to	DTP, video editor
		artwork and	Projects might		use or ar	and website tools
		retrieve it.	include digital		externally hosted	to use when
		In 1.4, open their	photography,		website or blog; a	developing
		eBook, import	searching for		digital camera to	marking materials
		images sourced	images online		take photos they	for an app.
		online to their	and creating		could import into	•
		eBook and save.	inage-based		3D design	
		In 1.5, record	presentation		software on a	
		audio, import it	slides.		laptop.	
		to the computer				
		and save their	(E.g. In 2.3,			
		work.	review, reject			
		In 1.6, open,	and rate the			
		modify, add	photographs they			
		inages to and	have taker.			
		save their	In 2.4, retrieve			
		popplets; fill in	information and			
		spreadsheets and	inages from			
		Google Forms.)	websites into			
		Ŭ	presentations,			
			and save their			
			work.			
			In 2.5, film and			
			upload a			
			working stop-			
			motion video.			
			In 2.6, use			
			questions to sort			
			and classify			
			objects; take,			
			upload and			
			organise			
			photographs;			
			add information			
			to a map.)			
			,			

	Collect	C.I.I.2. Use	C.2.1.2. Use	C.3.I.2. Design and	C.4.1.2. Design	C.5.I.2. Design	C.6.I.2. Design
	information.	technology	technology	create a range of	and create a	and create a	and create a
	o g by taking	purposefully to	purposefully to	programs, systems	range of	range of	range of
	e.g., by taking	create and	create and	and content that	programs,	programs,	programs,
	photographs or	manipulate digital	manipulate	accomplish given	systems and	systems and	systems and
	collecting	content.	digital content.	goals.	content that	content that	content that
	object.		0	The pupil can	accomplish given	accomplish given	accomplish given
		The pupil can	The pupil can	desian and create	goals.	goals.	gaals.
	Use ICT to sort	create original	create and edit	content on a	The pupil can	The pupil can	The pupil can
	and sequence	content using	original content	computer.	desian and create	desian and create	desian and create
	objects on a	digital technology.	for a given		content on a	programs on a	sustems in
	scroop or		purpose using	The pupil can plan	computer in	computer in	response to a
	Screen Ur	The pupil can	digital	and execute a	response to a	response to a	given goal.
	Interactive	create their own	technology.	project in which	given goal.	given goal.	0 0
	whiteboard.	original digital		they use software	0 0	0 0	The pupil can
		content using a	The pupil can	on a laptop or	With a given goal,	The pupil can	plan, design and
	Can use a	range of	create and edit	tablet to create	the pupil can plan	design a program	implement a
	simple	technologies.	their own	digital content with	and execute a	of their own in	system with
	programme	These might	original digital	some degree of	project in which	response to a	multiple,
	such as paint to	include laptop	content using a	independence. For	they use software	given goal and	interrelated
	draw a nicture	computers,	range of	example, they could	on a laptop or	write this in a	components with
		tablets,	technologies.	plan and shoot a	tablet to create	block-based	a given goal in
		smartphones,	Content-creation	video, plan and	digital content	language such as	mind.
		digital cameras,	technology might	create a	with some degree	Scratch. The	
		video cameras	include laptop	presentation on a	of independence.	program need not	
		and audio	computers,	given topic or plan	For example, they	be complex - a	
		recorders. Projects	tablets,	and then create an	could plan and	simple game	
		might include	smartphones	online survey.	compose original	would suffice, but	
		videoing one	with retwork		music using	it should be	
		another cooking,	connections,		sequencing	accomplished with	
		developing an	digital cameras,		software; plan	a degree of	
		eBook or an	video cameras		and create a web	independent	
		audiobook,	and audio		page; plan how	working.	
		creating a	recorders,		they could		
		greetings cara.	aithough eaiting		contribute to a		
		Look for some	is likely to take		shared wiki and		
		indication of the	piace or iaptops		then do so; plan		
		in this work	Dreisele wight		and create a		
		in mus work.	includo digital		presentation about		
		(Eq. In 12 lilm	phatagraphy		the weather. They		
		digital video	creating image		should evaluate		
		In 13 create an	hard		now effectively		
		ariginal painting	presentation		they have met the		
		In 14 create an	slides		the ariginal age		
		eBook including	composing an		ne vigitai goal.		
		images and	email and				
		ariginal text	creating simple				
		~~ yr ur sere.	menning surgice				

		In 1.5, create and	charts. Look for				
		record original	some indication				
		digital audio.	of the pupil's				
		In 1.6, create	creativity in this				
		data tables and	work and				
		trees.)	evidence that				
			they have edited				
			content.				
			(Ea In 23				
			take and edit				
			ariainal diaital				
			photographs				
			In 2.4 create				
			and edit their				
			awn				
			presentation				
			In 2.5 lilm and				
			edit a stan-				
			matian videa				
			In 2.6 take and				
			edit photographs				
			and create and				
			edit charte)				
				C 3 L 3 Callecting	C 4 13 Callecting	C 5 L 3 Callecting	613
				C.3.1.3. Collecting,	C.4.1.3. Collecting,	C.5.1.3. Collecting,	C.6.I.3.
				C.3.I.3. Collecting, analysing,	C.4.1.3. Collecting, analysing,	C.5.1.3. Callecting, analysing, evaluating and	C.6.1.3. Callecting,
				C.3.1.3. Collecting, analysing, evaluating and presenting data and	C.4.1.3. Callecting, analysing, evaluating and presenting data	C.5.I.3. Callecting, analysing, evaluating and presenting data	C.6.1.3. Collecting, analysing, evaluating, and
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information	C.4.1.3. Collecting, analysing, evaluating and presenting data and information	C.5.1.3. Callecting, analysing, evaluating and presenting data and information	C.6.1.3. Collecting, analysing, evaluating and presenting data
				C.3.1.3. Collecting, aralysing, evaluating and presenting data and information.	C.4.1.3. Collecting, analysing, evaluating and presenting data and information.	C.5.1.3. Callecting, analysing, evaluating and presenting data and information.	C.6.1.3. Collecting, analysing, evaluating and presenting data and information
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can	C.6.1.3. Collecting, analysing, evaluating and presenting data and information.
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and outputs	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information.	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data.	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and avaluate data
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information.	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data.	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information.	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data.
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information.	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data.
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use computers to collect	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use computers to	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information. Working with text, audia images and	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data. The pupil can avaluate the
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use computers to collect information and present this to as	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use computers to collect numerical data and access	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information. Working with text, audio, images or widge the suri	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data. The pupil can evaluate the avality of
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use computers to collect information and present this to an	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use computers to collect numerical data and present this to an	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information. Working with text, audio, images or video, the pupil	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data. The pupil can evaluate the quality of
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use computers to collect information and present this to an audience. For	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use computers to collect numerical data and present this to an	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information. Working with text, audio, images or video, the pupil can analyse information	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data. The pupil can evaluate the quality of numerical data,
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use computers to collect information and present this to an audience. For example, they could	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use computers to collect numerical data and present this to an audience. For	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information. Working with text, audio, images or video, the pupil can analyse information,	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data. The pupil can evaluate the quality of numerical data, deciding the extent
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use computers to collect information and present this to an audience. For example, they could shoot and then	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use computers to collect numerical data and present this to an audience. For example, they	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information. Working with text, audio, images or video, the pupil can analyse information, perhaps	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data. The pupil can evaluate the quality of numerical data, deciding the extent to which it is
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use computers to collect information and present this to an audience. For example, they could shoot and then show a wideo or	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use computers to collect numerical data and present this to an audience. For example, they could collect and	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information. Working with text, audio, images or video, the pupil can analyse information, perhaps summarising this.	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data. The pupil can evaluate the quality of numerical data, deciding the extent to which it is affected by
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use computers to collect information and present this to an audience. For example, they could shoot and then show a video or conduct an online	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use computers to collect numerical data and present this to an audience. For example, they could collect and present data about	C.5.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information. Working with text, audio, images or video, the pupil can analyse information, perhaps summarising this. They should	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data. The pupil can evaluate the quality of numerical data, deciding the extent to which it is affected by systematic or
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use computers to collect information and present this to an audience. For example, they could shoot and then show a video or conduct an online survey and present	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use computers to collect numerical data and present this to an audience. For example, they could collect and present data about the weather over	C.5.1.3. Callecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information. Working with text, audio, images or video, the pupil can analyse information, perhaps summarising this. They should evaluate the	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data. The pupil can evaluate the quality of numerical data, deciding the extent to which it is affected by systematic or random errors.
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use computers to collect information and present this to an audience. For example, they could shoot and then show a video or conduct an online survey and present the results. They	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use computers to collect numerical data and present this to an audience. For example, they could collect and present data about the weather over a period of time.	C.5.1.3. Callecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information. Working with text, audio, images or video, the pupil can analyse information, perhaps summarising this. They should evaluate the quality of the	C.6.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate data. The pupil can evaluate the quality of numerical data, deciding the extent to which it is affected by systematic or random errors. They should
				C.3.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present information. The pupil can use computers to collect information and present this to an audience. For example, they could shoot and then show a wideo or conduct an online survey and present the results. They should be able to	C.4.1.3. Collecting, analysing, evaluating and presenting data and information. The pupil can collect and present data. The pupil can use computers to collect numerical data and present this to an audience. For example, they could collect and present data about the weather over a period of time. They should be	C.5.1.3. Callecting, analysing, evaluating and presenting data and information. The pupil can analyse and evaluate information. Working with text, audio, images or video, the pupil can analyse information, perhaps summarising this. They should evaluate the quality of the information,	C.6.1.3. Collecting, analysing, evaluating and presenting data and infarmation. The pupil can analyse and evaluate data. The pupil can evaluate the quality of numerical data, deciding the extent to which it is affected by systematic or random errors. They should analyse their

			degree of	with a degree of	or questioning	producing
			independence.	independence.	assumptions that	summary
					have been made.	statistics, looking
					For example, they	for relationships,
					could work with	trends and
					information on e-	exceptions.
					safety, evaluating	
					its quality and	
					providing a clear	
					and coherent	
					summary.	

Information Technology – Searching

	Birth to	Three to	Reception	Year I	Year 2	Year 3	Year 4	Year 5	Year 6
	Three	Four							
	Year	Year							
	Olds	Olds							
Searching		Use a	Explore a			C.3.2.1. Use	C.4.2.1. Use search	C.5.2.1. Use	C.6.2.1. Use
		shortcut	teacher-			search	technologies	search	search
		such as an	selected			technologies.	effectively.	technologies	technologies
		icon on the	website to find			effectively.	The pupil can use	effectively.	effectively.
		computer /	a desired page.			The pupil can	a standard search	The pupil can use	The pupil can
		iPad to	using			search for	engine to find	filters to make	make use of a
		n au to	hyperlinks and			information within	information.	more effective use	range of search
		navigate to				a single site.		of a standard	engines appropriate
		a specific	navigation				The pupil can use	search engine.	to finding
		website.	buttons			The pupil can use	a common search		information that
						browser-specific	engine (such as	The pupil can use	is required.
						tools (e.g. the Find	Google with safe	a common search	
						command) and	search mode locked	engine (such as	The pupil can
						site-specific tools	in place)	Google with safe	show that they
						(such as the	effectively, to	search mode	can use effectively
						search tools for	search for	locked in place)	a range of
						Wikipedia or	particular	effectively, to	different search
						YouTube) to locate	information on the	search for	technologies,
						particular	web, such as	particular	including
						information on a	answers to	information on the	alternatives to
						web page or	questions they	web, such as	Google (such as
						within a website.	identify in a	answers to	Bing or Yahoo)
							research project.	questions they	and site-specific
								identify in a	search engines
								research project.	(such as those
								They should use	for the App Store
								built-in search	or Google Play).

 C. 3.2.2. Approximate C. 4.2.2. Approximate C. 5.2.2. C. 6.2.2. Approximate have search requires and have search requires and have search requires and have search engines. Search seques and have search seques and have a						tools to filter their results, such as by time, location or reading level.	E.g. They could demonstrate how they would use a range of search engines when researching available smartphone apps for a particular purpose.
				C.3.2.2. Appreciate how search results are selected and ranked. The pupil can understand that search engines select pages according to keywords found in the content. When using search engines, the pupil should demonstrate their understanding that the pages shown include the keywords they have specified. The pupil can use this knowledge by thinking of good keywords appropriate for what they are searching.	C.4.2.2. Appreciate how search results are selected and ranked. The pupil can understand that search engines rank pages according to relevance. The pupil can demonstrate their understanding that search engine results are ranked according to relevance, and that normally the top results on the first page are likely to be those most relevant to their query. If the pupil is unable to find good results on the first page, expect them to reconsider their keywords rather than looking at further pages of results.	C.5.2.2. Appreciate how search results are selected and ranked. The pupil can understand that search engines use a cached copy of the crawled web to select and rank results. The pupil can explain how a search engine creates an index from a cached copy of the web and uses this to select and rank results. The pupil might also show an awareness of the Page Rank algorithm in which results are ranked according to the number and quality of in- bound links.	C.6.2.2. Appreciate how search results are selected and ranked. The pupil can appreciate that search engines rank pages based on the number and quality of in- bound links. The pupil can demonstrate some awareness of the Page Rank algorithm, explaining that the quality of a page is determined largely on the basis of the number and quality of links pointing to that page in the engine's cached copy of the web, and that quality is itself determined recursively through Page Rank.

Digital Literacy – ESafety

Birth to	Three to	Pre-school	Year I	Year 2	Year 3	Year 4	Year 5	Year 6
Three	Four	and						
Year	Year	Reception						
Olds	Olds							
interested in pulley toys Can use age appropriate apps	interest in technology – wants to have a go on the whiteboard or use an iPad.	explore their environment using a range of multimedia equipment, including digital cameras, video cameras, microscopes etc. This could also include the use of tablets e.g. iPad to capture still and moving image.	technology safely and respectfully. The pupil can keep themselves safe while using digital technology. The pupil can understand that they need to keep safe when using digital technology. For example, they should know to use filtered Safe Search when looking for images on the web and that they should close the lid of a laptop (or turn over a tablet) and alert an adult if they come across unsuitable content. (E.g. In 1.3 and 1.4, close their laptop (or turn over their tablet) and tell a teacher if they find irappropriate images.)	technology safely and respectfully. The pupil can keep safe and show respect to others while using digital technology. The pupil should know that they need to keep themselves safe when using digital technology. E.g. They should know to use filtered SafeSearch when looking for images on the web and that they should close the lid of a laptop (or similar action) if they find inappropriate images. They should know to respect others' rights, including privacy and intellectual property when using computers, so should not look at someone else's work or copy it without permission and acknowledgement.	technology safely, respectfully and responsibly. The pupil can use digital technology safely and show respect for others when working online. The pupil should know that they need to keep themselves safe when using digital technology. For example, they should show respect for others when filming and should not normally post videos online. If responding to online surveys, they should do so anonymously, thinking carefully about information they give out.	technology safely, respectfully and responsibly. The pupil can demonstrate that they can act responsibly when using computers. The pupil can act responsibly when using computers. For example, they should act responsibly when developing computer games or prototype products. They should behave responsibly when using sampled music or creating a composition. They should show responsibility when creating or remixing online content, including observing copyright and any terms and conditions. They should contribute positively to a shared wiki.	technology safely, respectfully and responsibly. The pupil can demonstrate that they can act responsibly when using the Internet. The pupil can act responsibly when using the Internet. For example, they should act responsibly when participating in an online community, such as the Scratch community, if permitted to do so. They should demonstrate that they understand the importance of encrypted (HTTPS) connections when browsing the web and of using strong passwords to protect their identity online. They should act responsibly when creating, editing or commenting on	technology safely, respectfully and responsibly. The pupil can show that they can think through the consequences of their actions when using digital technology. The pupil can discuss likely and potential consequences of their actions when using digital technology in a range of contexts. Contexts might include developing smartphone apps; using online project management tools; collecting information for market research; posting original content online.

			They should observe age restrictions on computer games. (E.g. In 2.2, observe age restrictions when playing games out of school. In 2.3, ask before taking photos of others. In 2.4, know what to do if they encounter inappropriate content; acknowledge the source of information they use. In 2.6, know not to post images with metadata to the open web.)			web pages or blog posts.	
		C.I.I.2. Keeping	C.2.I.2. Keeping	C.3.1.2. Recognise	C.4.1.2. Recognise	C.5.1.2. Recognise	C.6.1.2. Recognise
		personal	personal	acceptable/	acceptable/	acceptable/	acceptable/
		information private	nformation private	behaviaur.	behaviaur	hehaviaur	hehaviaur.
		The pupil can	The pupil can	The source is a second	The must	The must be an	The musil
		understand that	understand that	ine pupil car	ine pupil can	ine pupil can discuss the	ine pupil can identilu principles
		information on	they should not	unacceptable	difference between	consequences of	underpinning
		the Internet can	share personal	behaviour when	acceptable and	particular	acceptable use of
		ue seen uy others.	ayornaion onine.	using digital	unacceptable	behaviours when	digital
		The pupil should	The pupil should	technology.	behaviours when	using digital	technologies.
		be aware that	understand that	The pupil car	techrologu.	ieuruuuyy.	The pupil can
		information stored	personal	identify what	<u> </u>	The pupil can	identify some
		on the web or	information	would be	The pupil can	discuss the likely	principles
		the Internet is	private: it should	unacceptable or	discuss the	or possible	underpinning
		available to other	not be posted	inappropriate	difference between	consequences of	acceptable
		people. E.g. They	online to a public	benaviour when	unacceptable	particular behaviaurs when	penaviour when
		should know that	audience and	technology in a	behaviours when	using digital	in a range of
		the images they	should only be	range of contexts.	using digital	technology in a	contexts. Contexts

			find online can be	shared privately	For example, they	technology in a	range of contexts.	could include
			found by others	with those who	should know what	range of contexts.	Contexts could	smartphone or
			too, and that the	they (or their	would be	Contexts could	include the Scratch	tablet use; the use
			queries they type	parents) would	unacceptable when	include the Scratch	website, or other	of online project
			in can be seen by	trust. E.g. The	using online	website, or other	online	management tools;
			those who run	pupil should	communities, such	online	communities; using	online surveys
			the search engine	recognise that	as the Scratch	communities; the	cryptography and	and recording of
			they use and the	photos they take	website, or when	use of others'	passwords;	interviews;
			school's network.	in school should	shooting or	original content,	creating websites	creating and
				not normally be	publishing video.	such as music	or writing blog	sharing digital
			(E.g. In 1.2, 1.3,	posted to the open	They should know	samples or web	posts.	content.
			1.4 and 1.6, know	web. They should	what would be	pages; wikis,		
			that some	know that photos	unacceptable use of	including		
			personal	taken with	the Command	Wikipedia.		
			information and	smartphones often	prompt, email or			
			images should be	contain hidden	online survey			
			kept private, and	information about	tools.			
			understand what	where the photo				
			should not be	was taken.				
			posted online.					
			In 1.3 and 1.4,	(E.g. In 2.2 and				
			realise that the	2.6, know that				
			images they	photos of				
			search for can be	themselves or				
			seen by others.)	other people				
				should not				
				normally be				
				uploaded to the				
				open web.				
				In 2.6, know that				
				photos can				
				contain metadata				
				revealing where				
				they were taken.)				
			C.I.I.3. Identify	C.2.1.3. Identify	C.3.1.3. Krow a	C.4.1.3. Know a	C.5.1.3. Know a	C.6.I.3. Krow a
			where to go for	where to go for	range of ways to			
			help and support	help and support	report concerns	report concerns	report concerns	report concerns
			when they have	when they have	and inappropriate	and inappropriate	and inappropriate	and inappropriate
			concerns about	concerns about	behaviour.	behaviour.	behaviour.	behaviour.
			content or contact	content or contact	Krow who to talk	Know who to talk	Know how to	Know a range of
			on the Internet or	on the Internet or	to about concerns	to about concerns	report concerns	ways to report
			other online	other online	and inappropriate	and inappropriate	and inappropriate	concerns and
			technologies.	technologies.	behaviour in	behaviour at home	behaviour in a	inappropriate
			The pupil can	The pupil can	school.	or in school	range of contexts	behaviour in a
			understand what	understand what			σ	variety of
			to do if they see	to do if they have	Pupils should know	Pupils should	Pupils should	contexts.
	1	1			1			

		disturbing content	concerns about	to report	know to report	know how to	
		online at home or	content or contact	inappropriate	inappropriate	report	Pupils should
		at school.	online.	behaviour when	behaviour when	inappropriate	krow how to
				using technology in	using technology	behaviour when	report
		The pupil should	The pupil should	school to their	in school to their	using technology	inappropriate
		know to close	know to close	teacher, the	teacher, the	in school:	behaviour when
		their laptop lid or	their laptop lid or	network manager	retwork manager	preferably this will	using technology
		turn their tablet	turn their tablet	or another trusted	or another trusted	be to their teacher,	in school:
		over if they find	over if they find	adult, and that	adult, and that	the network	preferably this
		content, such as	content, such as	they can discuss	they can discuss	manager or	will be to their
		inappropriate	inappropriate	ary concerns they	any concerns they	another trusted	teacher, the
		images, which	images, which	have with their	have with their	adult. They should	retwork manager
		might disturb	might disturb them	teacher or other	teacher or other	know how to	or another trusted
		them or other	or other pupils; if	trusted adults in	trusted adults in	report any	adult. They
		pupils. They	someone they don't	school.	school. They	concerns over	should know how
		should know to	trust contacts		should also know	inappropriate	to report any
		tell their teacher	them online; if		that any concerns	behaviour with	concerns over, or
		or their	someone makes		over, or	digital technology	inappropriate
		parents/carers if	inappropriate		inappropriate	at home.	behaviour with,
		this happens.	contact online.		behaviour with,	Preferably this	digital technology
			They should know		digital technology	would be through	at home.
		(E.g. In 1.3 and	to tell their teacher		at home can be	discussion with	Preferably this
		1.4, know to	.or their		discussed with	their parents, with	would be through
		close their laptop	parents/carers if		their parents, with	you or with	discussion with
		lid or turn their	this happens, and		you or with	another trusted	their parents, with
		tablet over and	be aware that		another trusted	adult. Pupils	you or with
		tell a teacher or	they could talk to		adult.	should also know	another trusted
		their	another trusted			how to report	adult. Pupils
		parents/carers if	adult or to			inappropriate	should also know
		they find	Childline about			behaviour to those	how to report
		inappropriate	this.			running websites	inappropriate
		images.)				which they	behaviour to
			(E.g. In 2.4,			regularly use, and	those running
			know to close			to Childline, CEOP	websites which
			their laptop lid or			or to the police.	they regularly use,
			turn their tablet				and to Childline,
			over and tell a				CEUP or the
			teacher, their				police. Pupils
			parents/carers,				should know that
			adult ar ar				activities can be
			agancu cuch ac				reported to CEOP
			Childling it that				ar the palice
			lind inappropriate				na la partice.
			content.)				
							1

			C.3.I.X. Be discerning in evaluating digital content. The pupil can decide whether a web page is relevant for a given purpose or question. The pupil can form a judgement about whether a web page is appropriate for finding out the answer to a question they have or for a given purpose.	C.4.1.X. Be discerning in evaluating digital content. The pupil can decide whether digital content is relevant for a given purpose or question. The pupil can form a judgement about whether a web page, such as a Wikipedia article, or other digital content is appropriate for finding out the answer to a question they have or for a given purpose.	C.5.I.X. Be discerning in evaluating digital content. The pupil can decide whether digital content is reliable and unbiased. The pupil can discuss whether particular content (such as a web page, other pupils' pages or blog posts) is reliable and whether it has been written from a neutral point of view. They should be able to spot some examples of bias in digital content.	C.6.1.X. Be discerning in evaluating digital content. The pupil can form an opinion about the effectiveness of digital content. Taking into account the interded audience and purpose of the content, the pupil can form a judgement as to, and provide reasons for, the extent to which they consider digital content to be effective. The content might be media resources or marketing materials.
			C.3.1.4. Understand the opportunities networks offer for communication and collaboration. The pupil can use email and videoconferencing in class.	C.4.1.4. Understand the opportunities networks offer for cammunication and collaboration. The pupil can work collaboratively with classmates on a shared wiki. The pupil can work collaboratively with their peers on a shared project, such as a class	C.5.1.4. Understand the opportunities networks offer for cammunication and collaboration. The pupil can work collaboratively with classmates on a class website or blog. The pupil can work productively and positively with others when developing a	C.6.1.4. Understand the opportunities networks offer for communication and collaboration. The pupil can use online tools to plan and carry out a collaborative project. The pupil can make use of an online tool to plan and carry out a

			wiki, making	shared website or	collaborative
			useful	contributing to a	project.
			contributions and	class blog.	
			providing feedback	U U	
			to others.	1	
				1 '	i

Digital Literacy – Using IT Beyond School

B	Birth to	Three to	Reception	Year I	Year 2	Year 3	Year 4	Year 5	Year 6
	Vogr	Olde							
	Olda	Olus							
Sha	ows ar	Shows an	Interact and	C.I.2.I. Recognise	C.2.2.1. Recognise				
inte	erest in	interest in	explore their	common uses of	common uses of				
لسم	lley toys	technology –	environment	information	information				
		wants to have	using a range	technology beyond	technology beyond				
		a go or the	of multimedia	school.	school.				
		whiteboard or	equipment,	The pupil can	The pupil can				
		use ar ipaa.	diaital	show an	show an				
		Use a varietu	cameras video	awareness of how	awareness of				
		of electronic	cameras,	IT is used for	how II is used				
		toys in play	microscopes	communication	for a range of				
		situations, e.g.,	etc. This could	negora scruor.	school				
		dance mats,	also include	The pupil can					
		Bee-bots, and	the use of	mention some of	The pupil can				
		remote control	iPad ta captura	the ways in which	rane a rumber				
		basic	still and	IT is used to	of purposes for				
		directional	movina imaae.	communicate	which IT is used				
		larguage.	0 0	beyond school.	beyond school.				
		(forward,	Collect	E.g. They might	the pupil might				
		backwards,stop)	information,	people use social	can share work				
			e.g., by taking	media such as	and discuss				
			protographs	Facebook, email,	ideas in online				
			or collecting	video calls or	communities; that				
			uiger.	online greetings to	photos can be				
				say happy birthday	taken, edited and				
				to their friends.	shared easily				
				(Fa In 16	technology: that				
				recoanise online	the web is made				
				collaboration tools	up of information				
				such as Google	shared by people				

		Forms and the	and		
		Google Suite.)	organisations;		
		0	that people use		
			email for a range		
			of purposes and		
			in a variety of		
			contexts; that		
			scientists use		
			computers when		
			collecting and		
			analysing data.		
			0 0		
			(E.g. In 2.1 and		
			2.2, recognise		
			that people can		
			share work and		
			discuss ideas		
			using online		
			communities.		
			In 2.3, recognise		
			that people take,		
			edit and share		
			photographs		
			using digital		
			technology.		
			In 2.4, recognise		
			that people		
			publish useful		
			information on		
			the web.		
			In 2.5, recognise		
			that videos can		
			be edited digitally		
			to great effect.		
			In 2.6, recognise		
			that scientists use		
			a range of digital		
			technologies when		
			collecting and		
			analysing data.)		

Characteristics of Effective Computing Teaching What would I see in a unit of Computing? What would I see in a Lesson?

Developing competency in Computing	Opportunity to develop an understanding		
skills and understanding: teaching in a	of Computer Science, Information		
sequential manner; learning is	Technology and Digital Literacy within		
progressive.	blacks of work.		
5-minute recap at the beginning of each	Opportunities to use and develop		
lesson to encourage retention of key	Computing technical vocabulary e.g.		
knowledge and vocabulary.	coding, debugging, algorithm		
Range of activities both using	Development of knowledge, skills and		
technology and unplugged.	understanding in line with the National		
	Curriculum.		
	Developing competency in Computing skills and understanding: teaching in a sequential manner; learning is progressive. 5-minute recap at the beginning of each lesson to encourage retention of key knowledge and vocabulary. Range of activities both using technology and unplugged.		