Computing	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Programming			Algorithms, prog	gramming	Create program	mes		
	Begin to identify	Playing and	Understands	Understands	Understands	Understands	Understands	Understands
	devices around	Exploring	what an	algorithms are	what a <b>command</b>	what a repetition	what a variable	what an <b>input</b>
	school and home	Move like a	algorithm is.	used to achieve	and a <b>sequence</b>	is.	and <b>conditional</b>	and <b>output</b> is and
	they can control.	programmable	Understander in	specific goals.	is.	Can made design	is.	how their used.
	Line communication to	robot following	Understands an	Lindonata a da a a	Can was didasian	Can read, design	Can was didastan	Can maded design
	Use commands to move electronic	instructions e.g. 'up', 'down', 'left'	algorithm is a set of precise	Understands an algorithm is a	Can read, design and write	and write a program using	Can read, design and write a	Can read, design and write a
		and 'right'.	instructions.	program used on	programs to	repetition.	simple program	simple program
	toys.	and right.	ilistructions.	a range of digital	achieve specific	repetition.	using a <b>variable</b>	to achieve a
	Use several	Explore how	Can plan a simple	devices.	goals on a range	Can plan and run	and a <b>conditional</b> .	required <b>output</b> .
	commands to	characters (Red	algorithm.	devices.	of devices and	a <b>program</b> of	and a <b>conditional</b> .	required output.
	achieve and	Riding Hood etc)	algorithm.	Know what a <b>bug</b>	applications.	simple commands	Can work	I can use different
	outcome I.e.	might travel to a	Can test a simple	is in a program.	аррисастопъ.	incorporating	collaboratively to	inputs (including
	microwave, till.	desired location	algorithm that	15 a p. 68. a	Can plan and run	repetition.	plan and run a	sensors) to
	, , ,	using toys.	they planned.	Can identify and	a <b>sequence</b> of		program	control a device
		0.17	,	debug an error in	simple	Can read, design,	incorporating a	or onscreen
		Active Learning	Can identify a	an <b>algorithm</b> .	commands.	write and debug a	variable and	action.
		Put instructions	mistake in an			program using	conditional.	
		into order e.g.	algorithm.	Can plan and	Read, design,	repetition to		Read, design and
		practically move		create an	write and debug a	control a simple	Can read, design,	write a program
		elements of a	Can plan, test and	algorithm to	program to	circuit.	write and debug a	using a variable to
		recipe or simple	successfully run	achieve specific	simulate physical		program using a	achieve a
		instructions.	an <b>algorithm</b> on	goals.	systems.	Can experiment	variable and a	required <b>output</b> .
			more than one			and debug a	conditional.	
		Program toys	device (e.g.	Can design, test	Can plan and run	program using		I can use different
		(BeeBot) to move	Beebot and an	and successfully	a <b>sequence</b> of	repetition to	Experiment and	inputs (including
		across a grid.	app)	run an <b>algorithm</b>	simple commands	improve on a	debug a program	sensors) to
				on a number of	to achieve a	simple electronic	using a variable	control a device
		Creating and		applications and	specific goal.	circuit.	and a conditional	or onscreen
		thinking critically		devices.	Cara mandada da	C	statement to	action and predict
		Predict the		Can was Lasia ta	Can read, design,	Can experiment	improve the	what will happen
		outcome of a set		Can use <b>Logic</b> to plan and predict	write and debug a	with another's	quality and	(output).
		of instructions.		the intended	program to achieve specific	code to improve a program	simplicity.	Experiment and
		Matching symbols		outcome of an	goals and to	incorporating	Can create my	debug a program
		to simple grids		algorithm.	simulate physical	repetition.	own program to	using a variable
		and the directions		aigui iliiii.	systems.	repetition.	solve a problem,	and a selection
		the trucks will			Systems.		incorporating a	statement to
	L	THE THUCKS WIII		l	l	1	incorporating a	statement to

		take on the masking tape paths. (Figure 2.)			Can use evaluation to identify and make attempts at improving their Program by ensuring their sequence is as effective as possible.	Can use decomposition to break down a task into smaller, more-manageable parts.	variable and conditional.  Can use abstraction to tinker and debug their program to make it as simple and effective as possible.	improve the quality and simplicity.  Can identify patterns in their program and use it to debug their program to make it as effective as possible.
Application –			Using programm	nes		l use networks an		
Using to solve						r, excel, PowerPoi		
real life problems	Understand and use keyboard, mouse etc. in their play.	Can use the keyboard to enter letter strings (play writing)	Can use technology to create and present their ideas.	Can use technology to organise and present their ideas in different	Can create different effects with different technology tools.	Can use photos, video and sound to create an atmosphere when presenting	Can use text, photo, sound and video editing tools to refine their work.	Can talk about audience, atmosphere and structure when planning a
	Begin to sort, classify or group various objects progressing from practical activities to the use of ICT, e.g., practically sorting fruit into colours, types or shapes, and then on-screen.  Begin to use ICT to sort and sequence objects on a screen or interactive whiteboard.	Begin to use the space bar to break letter strings into groups of letters  Can use the Back-Space key to delete.  Can use a word bank or word list to enter text e.g. to match with pictures.  Can complete	Can use the keyboard to enter text.  Can save information in a special place and retrieve it again.  Can talk about the different ways in which information can be shown.  Can use	ways.  Can use the keyboard on their device to add, delete and space text for others to read.  Can talk about an online tool that will help them to share their ideas with other people.  Can save and	Can combine a mixture of text, graphics and sound to share their ideas & learning.  Can use appropriate keyboard commands to amend text on their device, including making use of a spellchecker.	to different audiences.  Can confidently explore new media to extend what they can achieve.  Can change the appearance of text to increase its effectiveness.  Can create, modify and present	Can use the skills they have already developed to create content using unfamiliar technology.  Can select, use and combine the appropriate technology tools to create effects for impact.  Can select an appropriate	particular outcome.  Can confidently identify the potential of unfamiliar technology to increase their creativity.  Can combine a range of media, recognising the contribution of each to achieve a particular
	whiteboard.  Pupils produce simple	Can complete practical sorting activities and	Can use technology to collect	Can save and open files on the device they use.	Can evaluate their work and	present documents for a particular purpose.	online or offline tool to create and share ideas.	outcome.

pictograms with	discuss sorting	information,	Can talk about	improve its	Can use a	Can review and	Can explain why
help.	criteria.	including	the different	effectiveness.	keyboard	improve their	they have
		photos, video and	ways they can use		confidently and	work and support	selected a tool for
	Begin to develop	sound.	technology to	Can use an	make use of a	others to improve	a specific
	simple		collect	appropriate tool	spellchecker to	their work.	purpose.
	classification	Pupils can sort	information e.g. a	to share their	write and review		p an p accor
	Skills.	different kinds of	camera,	work online.	their work.	Can use a	Can be digitally
	SKIIIS.	information and	microscope or			spreadsheet and	discerning when
		present it to	sound recorder.	Can talk about	Can use an	database to	evaluating the
		others.		the different	appropriate tool	collect and record	effectiveness of
		others.	Can make and	ways data can be	to share their	data.	their work and
			save a chart or	organised.	work and	uata.	the work of
		Pupils can add	graph using the	organiscu.	collaborate		others.
		information	data they collect.		online.	Pupils can	
		to a pictograph	data they conect.	Can search a	Offilitie.	present data in an	Can check the
		and talk about		ready-made		appropriate way.	data they have
		what they have	Can talk about	database to	Can give		collected for
		found out.	the data that is	answer questions.	constructive	Can search a	accuracy and
			shown on their		feedback to help	database using	plausibility.
			chart or graph.	Can collect data	peers improve	different	plausibility.
				to help them to	and refine their	operators to	
				answer a	own work.	refine their	Can interpret the
				question.		search.	data they collect.
					Can organise data		
				Can add to a	in different ways.	Can talk about	Can present their
				database.		mistakes in data	data in an
					Can collect data	and suggest how	appropriate way.
				Can explain	and identify	it could be	
				whether a	where it could be	checked.	Can interrogate a
				resource they are	inaccurate.		database.
				using is on the			
				internet, the	Can plan, create		
				school network	and search a		
				their own device.	database to		
					answer questions.		
					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
					Can choose the		
					best way to		
					present data to		
					their peers.		
					men peers.		

Safety – Being			Keeping safe		Identify respons	ible behaviour, kr	now how to repor	t concerns
responsible	Self-Image &	Self-Image &	Self-Image &	Self-Image &	Self-Image &	Self-Image &	Self-Image &	Self-Image &
users –	Identity	Identity	Identity	Identity	Identity	Identity	Identity	Identity
Education for	I can recognise that	I can recognise that	I can recognise that	I can explain how	I can explain what is	I can explain how	I can explain how	I can describe ways
	I can say 'no' /	I can say 'no' /	there may be	other people's	meant by the term	my online identity	identity online can	in which media can
a Connected	'please stop' / 'I'll	'please stop' / 'I'll	people online who	identity online can	'identity'.	can be different to	be copied, modified	shape ideas about
World	tell' / 'I'll ask' to	tell' / 'I'll ask' to	could make me feel	be different to their identity in real life.		the identity I	or altered.	gender.
	somebody who asks	somebody who asks	sad, embarrassed or	identity in real life.	I can explain how I	present in 'real life'.		
	me to do something	me to do something	upset.	I can describe ways	can represent		I can demonstrate	I can identify
	that makes me feel	that makes me feel		in which people	myself in different	Knowing this, I can	responsible choices	messages about
	sad, embarrassed or	sad, embarrassed or	If something	might make	ways online.	describe the right	about my online	gender roles and
	upset.	upset.	happens that makes me feel sad,	themselves look	1	decisions about	identity, depending	make judgements
	Lana avalain kavv	Lasa sualsia kau	worried,	different online.	I can explain ways in	how I interact with others and how	on context.	based on them.
	I can explain how this could be either	I can explain how this could be either	uncomfortable or		which and why I might change my	others perceive me.	Online	I can challenge and
	in real life or online.	in real life or online.	frightened I can give	I can give examples	identity depending	others perceive me.	Online Relationships	explain why it is
			examples of when	of issues online that might make me feel	on what I am doing	Online	I can explain that	important to reject
	Online	Online	and how to speak to	sad, worried,	online (e.g. gaming;	Relationships	there are some	inappropriate
	Relationships	Relationships	an adult I can trust.	uncomfortable or	using an avatar;	I can describe	people I	messages about
	I can recognise	I can recognise	Online	frightened; I can	social media).	strategies for safe	communicate with	gender online.
	some ways in which	some ways in which	Relationships	give examples of	,	and fun experiences	online who may	<b>G</b>
	the internet can be used to	the internet can be used to	I can use the	how I might get	Online	in a range of online	want to do me or	I can describe issues
	communicate.	communicate.	internet with adult	help.	Relationships	social	my friends harm. I	online that might
	communicate.	communicate.	support to		I can describe ways	environments.	can recognise that this is not my/our	make me or others
	I can give examples	I can give examples	communicate with	Online	people who have		fault.	feel sad, worried,
	of how I (might) use	of how I (might) use	people I know.	Relationships I can use the	similar likes and	I can give examples of how to be		uncomfortable or
	technology to	technology to		internet to	interests can get	respectful to others	I can make positive	frightened. I know
	communicate with	communicate with	I can explain why it is important to be	communicate with	together online.	online.	contributions and	and can give
	people I know.	people I know.	considerate and	people I don't know	I can give examples		be part of online	examples of how I
	Online Reputation	Online Reputation	kind to people	well (e.g. email a	of technology-	Online Reputation	communities.	might get help, both
	I can identify ways	I can identify ways	online.	penpal in another	specific forms of	I can describe how	I can describe some	on and offline.
	that I can put	that I can put		school/ country)	communication	others can find out	of the communities	
	information on the	information on the	Online Reputation		(e.g. emojis,	information about	in which I am	I can explain why I
	internet.	internet.	I can recognise that	I can give examples of how I might use	acronyms, text	me by looking online.	involved and	should keep asking
			information can	technology to	speak).	online.	describe how I	until I get the help I
	Online Bullying	Online Bullying	stay online and could be copied.	communicate with	I can explain some	I can explain ways	collaborate with	need.
	I can describe ways	I can describe ways	could be copied.	others I don't know	risks of	that some of the	others positively.	Online
	that some people can be unkind	that some people can be unkind	I can describe what	well.	communicating	information about		Online Relationships
	online.	online.	information I should		online with others I	me online could	Online Reputation	I can show I
	oranic.	Offinite.	not put online		don't know well.	have been created,	I can search for information about	understand my
				Online Reputation		copied or shared by	an individual online	responsibilities for
						others.	an marvioud online	

I can offer examples of how this can make others feel.

#### **Managing Online** Information

I can talk about how I can use the internet to find things out.

I can identify devices I could use to access information on the internet.

I can give simple examples of how to find information (e.g. search engine, voice activated searching).

#### Health, Wellbeing & Lifestyle

I can identify rules that help keep us safe and healthy in and beyond the home when using technology.

I can give some simple examples.

# **Privacy & Security**

I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).

I can offer examples of how this can make others feel.

#### **Managing Online** Information I can talk about how I can use the internet to find

things out.

I can identify devices I could use to access information on the internet.

I can give simple examples of how to find information (e.g. search engine, voice activated searching).

# Health, Wellbeing & Lifestyle

I can identify rules that help keep us safe and healthy in and beyond the home when using technology.

I can give some simple examples.

#### Privacy & Security I can identify some simple examples of my personal information (e.g. name. address. birthday, age,

location).

without asking a trusted adult first.

#### Online Bullving I can describe how to behave online in ways that do not upset others and

can give examples.

# Managing Online Information I can use the

internet to find things out. I can use simple keywords in search engines.

I can describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened.

# Health, Wellbeing & Lifestyle

I can explain rules to keep us safe when we are using technology both in and beyond the home

I can give examples of some of these rules.

#### Privacy & Security I can recognise more detailed

I can explain how information put online about me can last for a long time.

I know who to talk to if I think someone has made a mistake about putting something online.

## Online Bullving

I can give examples of bullving behaviour and how it could look online.

I understand how bullying can make someone feel.

I can talk about how someone can/would get help about being bullied online or offline.

## **Managing Online** Information

I can use keywords in search engines.

I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).

I can explain what voice activated searching is and

I can explain why I should be careful who I trust online and what info I can trust them with.

I can explain how my and other people's feelings can be hurt by what is said or written online.

I can explain why I can take back my trust in someone or something if I feel nervous, uncomfortable or worried.

I can explain what it means to 'know someone' online and why this might be different from knowing someone in real life.

I can explain what is meant by 'trusting someone online'. I can explain why this is different from 'liking someone online'.

# Online Reputation

I can search for information about myself online.

I can recognise I need to be careful before I share

# Online Bullying I can identify some online technologies

where bullying might take place.

I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).

I can explain why I need to think carefully about how content I post might affect others, their feelings and how it may affect how others feel about them (their

#### **Managing Online** Information

reputation).

I can analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what criteria have to be met before something is a 'fact'.

I can describe how I can search for information within a wide group of technologies (e.g. social media, image sites, video sites).

and create a summary report of the information I find.

I can describe ways that information about people online can be used by others to make judgments about an individual.

### Online Bullying

I can recognise when someone is upset, hurt or angry online.

I can describe how to get help for someone that is being bullied online and assess when I need to do or say something or tell someone.

I can explain how to block abusive users. I can explain how I would report online bullying on the apps and platforms that I use.

I can describe the helpline services who can support me and what I would say and do if I needed their help (e.g. Childline).

the well-being of others in my online social group.

I can explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming).

I can demonstrate how I would support others (including those who are having difficulties) online.

I can demonstrate ways of reporting problems online for both myself and my friends.

#### Online Reputation

I can explain how I am developing an online reputation which will allow other people to form an opinion of me.

I can describe some simple ways that help build a positive online reputation.

# Online Bullving

I can describe how to capture bullying content as evidence (e.g. screen-grab,

l l c	can describe the	I can describe the	examples of	how it might be	anything about	I can describe some	Managing Online	URL, profile) to
	eople I can trust	people I can trust	information that is	used (e.g. Alexa,	myself or others	of the methods	Information	share with others
	nd can share this	and can share this	personal to me (e.g.	Google Now, Siri).	online.	used to encourage	I can use different	who can help me.
wi	vith; I can explain	with; I can explain	where I live, my	<i>,</i> ,		people to buy things	search technologies.	
	hy I can trust	why I can trust	family's names,	I can explain the	I know who I should	online (e.g.	5	I can identify a
	nem.	them.	where I go to	difference between	ask if I am not sure	advertising offers;	I can evaluate	range of ways to
			school).	things that are	if I should put	in-app purchases,	digital content and	report concerns
Co	opyright &	Copyright &	,	imaginary, 'made	something online.	pop-ups) and can	can explain how I	both in school and
	wnership	Ownership	I can explain why I	up' or 'make	Ü	recognise some of	make choices from	at home about
	know that work I	I know that work I	should always ask a	believe' and things	Online Bullying	these when they	search results.	online bullying.
cro	reate belongs to	create belongs to	trusted adult before	that are 'true' or	I can explain what	appear online.		, 0
me	ne.	me.	I share any	'real'.	bullying is and can		I can explain key	Managing Online
			information about		describe how	I can explain that	concepts including:	Information
I c	can name my work	I can name my work	myself online.	I can explain why	people may bully	some people I 'meet	data, information,	I can use search
so	o that others know	so that others know		some information I	others.	online' (e.g. through	fact, opinion belief,	technologies
it l	belongs to me.	it belongs to me.	I can explain how	find online may not		social media) may	true, false, valid,	effectively.
			passwords can be	be true.	I can describe rules	be computer	reliable and	
			used to protect		about how to	programmes	evidence.	I can explain how
			information and	Health, Wellbeing	behave online and	pretending to be		search engines work
			devices.	& Lifestyle	how I follow them.	real people.	I understand the	and how results are
				I can explain simple			difference between	selected and
			Copyright &	guidance for using	Managing Online	I can explain why	online mis-	ranked.
			Ownership	technology in	Information	lots of people	information	
			I can explain why	different	I can use key	sharing the same	(inaccurate	I can demonstrate
			work I create using	environments and	phrases in search	opinions or beliefs	information	the strategies I
			technology belongs	settings.	engines.	online does not	distributed by	would apply to be
			to me.		_	make those	accident) and dis-	discerning in
				I can say how those	I can explain what	opinions or beliefs	information	evaluating digital
			I can say why it	rules/guides can	autocomplete is	true.	(inaccurate	content.
			belongs to me (e.g.	help me.	and how to choose		information	
			'it is my idea' or 'I		the best suggestion.	Health, Wellbeing	deliberately	I can describe how
			designed it').	Privacy & Security		& Lifestyle	distributed and	some online
				I can describe how	I can explain how	I can explain how	intended to	information can be
			I can save my work	online information	the internet can be	using technology	mislead).	opinion and can
			so that others know	about me could be	used to sell and buy	can distract me		offer examples.
			it belongs to me	seen by others.	things.	from other things I	I can explain what is	
			(e.g. filename,			might do or should	meant by 'being	I can explain how
			name on content).	I can describe and	I can explain the	be doing.	sceptical'. I can give	and why some
				explain some rules	difference between		examples of when	people may present
				for keeping my	a 'belief', an	I can identify times	and why it is	'opinions' as 'facts'.
				information private.	'opinion' and a	or situations when I	important to be	
					'fact'.	might need to limit	'sceptical'.	I can define the
				I can explain what		the amount of time		terms 'influence',
				passwords are and		I use technology.	I can explain what is	'manipulation' and
				can use passwords			meant by a 'hoax'. I	'persuasion' and
							can explain why I	explain how I might

for my accounts and	Health, Wellbeing	I can suggest	need to think	encounter these
devices.	& Lifestyle	strategies to help	carefully before I	online (e.g.
devices.	I can explain why	me limit this time.	forward anything	advertising and 'ad
Lean avalain havv	spending too much	me minicuns ume.	online.	•
I can explain how		Duite and O. Caracusite.	onine.	targeting').
many devices in my	time using	Privacy & Security	Lana avalaia volev	
home could be	technology can	I can explain what a	I can explain why	I can demonstrate
connected to the	sometimes have a	strong password is.	some information I	strategies to enable
internet and can list	negative impact on		find online may not	me to analyse and
some of those	me; I can give some	I can describe	be honest, accurate	evaluate the validity
devices.	examples of	strategies for	or legal.	of 'facts' and I can
	activities where it is	keeping my		explain why using
Copyright &	easy to spend a lot	personal	I can explain why	these strategies are
Ownership	of time engaged	information private,	information that is	important.
I can describe why	(e.g. games, films,	depending on	on a large number	
other people's work	videos).	context.	of sites may still be	I can identify, flag
belongs to them.			inaccurate or	and report
	Privacy & Security	I can explain that	untrue. I can assess	inappropriate
I can recognise that	I can give reasons	others online can	how this might	content.
content on the	why I should only	pretend to be me or	happen (e.g. the	
internet may belong	share information	other people,	sharing of	Health, Wellbeing
to other people.	with people I	including my	misinformation	& Lifestyle
	choose to and can	friends.	either by accident	I can describe
	trust. I can explain		or on purpose).	common systems
	that if I am not sure	I can suggest		that regulate age-
	or I feel pressured, I	reasons why they	Health, Wellbeing	related content (e.g.
	should ask a trusted	might do this.	& Lifestyle	PEGI, BBFC,
	adult.		I can describe ways	parental warnings)
		I can explain how	technology can	and describe their
	I understand and	internet use can be	affect healthy sleep	purpose.
	can give reasons	monitored.	and can describe	
	why passwords are		some of the issues.	I can assess and
	important.	Copyright &		action different
		Ownership	I can describe some	strategies to limit
	I can describe	When searching on	strategies, tips or	the impact of
	simple strategies for	the internet for	advice to promote	technology on my
	creating and	content to use, I can	healthy sleep with	health (e.g. <b>night</b> -
	keeping passwords	explain why I need	regards to	shift mode, regular
	private.	to consider who	technology.	breaks, correct
		owns it and	0,	posture, sleep, diet
	I can describe how	whether I have the	Privacy & Security	and exercise).
	connected devices	right to reuse it.	I can create and use	
	can collect and		strong and secure	I can explain the
	share my	I can give some	passwords.	importance of self-
	information with	simple examples.	passwo. as.	regulating my use of
	others.	Jimpie examples.	I can explain how	technology; I can
	outers.		<u>.</u>	• .
I			many free apps or	demonstrate the

1	I		Comunicable 0		consisses may read	stratagies Luce to
			Copyright &		services may read	strategies I use to
			Ownership		and share my	do this (e.g.
			I can explain why		private information	monitoring my time
			copying someone		(e.g. friends,	online, avoiding
			else's work from the		contacts, likes,	accidents).
			internet without		images, videos,	
			permission can		voice, messages,	Privacy & Security
			cause problems.		geolocation) with	I use different
					others.	passwords for a
			I can give examples			range of online
			of what those		I can explain how	services.
			problems might be.		and why some apps	
					may request or take	I can describe
					payment for	effective strategies
					additional content	for managing those
					(e.g. in-app	passwords (e.g.
					purchases) and	password
					explain why I should	managers,
					seek permission	acronyms, stories).
					from a trusted adult	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
					before purchasing.	I know what to do if
					berere parenasing.	my password is lost
					Copyright &	or stolen.
					Ownership	or storen.
					I can assess and	I can explain what
					justify when it is	app permissions are
					acceptable to use	and can give some
					•	_
					the work of others.	examples from the
						technology or
					I can give examples	services I use.
					of content that is	
					permitted to be	I can describe
					reused.	simple ways to
						increase privacy on
						apps and services
						that provide privacy
						settings.
						I can describe ways
						in which some
						online content
						targets people to
						gain money or
						information
						illegally; I can
						describe strategies
1				l .		accorde strategies

				to help me identify such content (e.g. scams, phishing).
				Copyright & Ownership I can demonstrate the use of search tools to find and access online content which can be reused by others.
				I can demonstrate how to make references to and acknowledge sources I have used from the internet.