

# Computing

Computing National Curriculum objectives	
Key Stage 1	Key Stage 2
<ul style="list-style-type: none"> <li>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>create and debug simple programs</li> <li>use logical reasoning to predict the behaviour of simple programs</li> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>recognise common uses of information technology beyond school</li> <li>use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul>	<ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</li> <li>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> </ul>

Purple – Computer programming objectives.

Blue – ICT/digital literacy objectives

Grey – E-safety objectives.

Not highlighted – digital networks.

	T1 We are mathematicians	T2 We are historians	T3 We are geographers	T4 We are readers and writers	T5 We are scientists and engineers	T6 We are creative
Driver	Love of learning	History	Geography	Reading	Science	The Arts
	E-safety	Digital Literacy and ICT	Computer Science	Digital Literacy and ICT- Networks	Digital Literacy and ICT	Digital Literacy and ICT- Data
EYFS Big Experiences	Make a new friend	Toasting marshmallows	Changing snow	Treasure hunt	Look after an animal	Cook your own lunch
EYFS	Using technology: interactive whiteboard, iPads, taking photographs, Beebots					
Year 1	How to respond to something that upsets us; Seeking help	Parts of a computer; Basic tasks (switch on/off, log on/off, open); Paint; Mouse control; Typing	Algorithms (instructions); Inputting simple instructions- Beebot	Everyday uses	Parts of a computer; Basic tasks (switch on/off, log on/off, open); Paint; Mouse control; Typing	Data- pictograms; Move images to show data; Mouse control
Year 2	Fake information; Cyberbullying; Private information; Seeking help	Wider uses of ICT; Microsoft- Word; Mouse control; Save- work; Copy and paste	Algorithms; Inputting more detailed instructions- Beebot	Website purposes; Save and retrieve; Folders	Wider uses of ICT; Microsoft- Word; Mouse control; Save- work; Copy and paste	Data- branching tree; Use images to show data; Copy and paste
Year 3	How to respond to messages; Passwords for privacy; Healthy screen time; Seeking help	Searching using the internet; Microsoft- PowerPoint; Fonts and size	Algorithms; Simple algorithms- Scratch	Search engine retrievals- relevant to search word; Emailing; Every day uses	Searching using the internet; Refining searches; Microsoft- PowerPoint; Fonts and size	Data- questionnaire; Microsoft- Word; Use tables on Word to show data
Year 4	Fake information; Acceptable and unacceptable behaviours; Gaming; Digital footprint; Seeking help	Save- images; Searching using the internet; Microsoft- PowerPoint animations; Edit images- resizing	Algorithms; Simple algorithms- Scratch; Debugging	Every day uses; Search engines retrievals- ranking; Searching using the internet search tools; Uploading- images	Save- images; Searching using the internet; Refining searches; Microsoft- PowerPoint animations; Edit images- resizing	Microsoft- Excel; Use tables on Excel to show data; Cells- adapt size when needed
Year 5	Private information; Privacy settings; Behaviours online; Reporting concerns; Reliability	Searching using the internet; Reliability; Microsoft- PowerPoint importing images and sounds	Flowcharts; Algorithms; Creating algorithms- Scratch; Debugging and fixing	Internet; Save and Save As; Search engine retrievals- order results and why	Searching using the internet; Multiple sources; Reliability; Microsoft- PowerPoint 'professional presentation'	Microsoft- Excel; Basic formula for one step calculations; Use graphs on Excel to show data
Year 6	Social media; Gaming; Digital footprint; Seeking help; Privacy settings; Age certs	Reliability; Searching using the internet; Microsoft- Publisher; Edit images- Photoshop	Flowcharts; Algorithms; Increasingly complex algorithms- Scratch; Debugging and fixing	Networks; Internet and WWW; Search engine retrievals- reliability	Reliability; Searching using the internet; Multiple sources; Microsoft- Publisher; Target audience of websites	Microsoft- Excel; Using formula for two step calculations; Sort and filter tool

Threads running throughout: E-safety; Literacy and fluency of use (mouse skills, typing, opening, closing etc)