

## PROGRESSION OF SKILLS IN COMPUTING

### Key Stage 1

Disciplines	NC Statement	KS1
Computer Science	<p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple program</p>	<p>Understand what algorithms are (1.1, 1.2, 1.5, 2.1, 2.2)</p> <p>Understand that algorithms are implemented as programs on digital devices (1.1, 1.2, 1.5, 2.1, 2.2)</p> <p>Understand that programs execute by following precise and unambiguous instructions (1.1, 1.2, 1.5, 2.1, 2.2)</p> <p>Create simple programs (1.1, 1.5, 2.1)</p> <p>Debug simple programs (1.1, 1.5, 2.1)</p> <p>Use logical reasoning to predict the behaviour of own programs (1.1, 2.1, 2.2)</p>
Information Technology	<p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p>	<p>Use technology purposefully to create digital content (1.2, 1.3, 1.4, 1.5, 1.6, 2.3, 2.4, 2.5, 2.6)</p> <p>Use technology purposefully to store digital content (1.2, 1.3, 1.4, 1.5, 1.6, 2.3, 2.4, 2.5, 2.6)</p> <p>Use technology purposefully to retrieve digital content (1.2, 1.3, 1.4, 1.5, 1.6, 2.3, 2.4, 2.5, 2.6)</p> <p>Use technology purposefully to organise digital content (1.2, 1.3, 1.4, 1.5, 1.6, 2.3, 2.4, 2.5, 2.6)</p> <p>Use technology purposefully to manipulate digital content (1.2, 1.3, 1.4, 1.5, 1.6, 2.3, 2.4, 2.5, 2.6)</p>
Digital Literacy	<p>Recognise common uses of information technology beyond school</p> <p>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</p>	<p>Recognise common uses of information technology at home (1.2, 1.3, 1.4, 1.5, 1.6, 2.2, 2.3, 2.4, 2.5, 2.6)</p> <p>Recognise common uses of information technology outdoors (1.2, 1.3, 1.4, 1.5, 1.6, 2.2, 2.3, 2.4, 2.5, 2.6)</p>

		<p>Use technology safely (1.4, 1.6, 2.2, 2.3, 2.4, 2.5, 2.6)</p> <p>Keep personal information private (1.4, 1.6, 2.2, 2.3, 2.4, 2.5, 2.6)</p> <p>Use technology respectfully (1.4, 1.6, 2.2, 2.3, 2.4, 2.5, 2.6)</p> <p>Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies (1.4, 1.6, 2.3, 2.4, 2.5, 2.6)</p>
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## Key Stage 2

Disciplines	NC Statement	KS2
Computer Science	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	Write programs that accomplish specific goals (3.1, 4.1, 4.2, 5.1, 5.6, 6.1, 6.2, 6.6)
		Design programs that accomplish specific goals (3.1, 4.1, 4.2, 5.1, 5.6, 6.1, 6.2, 6.6)
		Debug programs that accomplish specific goals (3.1, 3.2, 4.1, 4.2, 5.1, 5.6, 6.1, 6.2, 6.6)
		Control or simulate physical systems (3.1, 3.2, 4.2, 5.1, 5.6, 6.1, 6.6)
		Solve problems by decomposing them into smaller parts (3.1, 4.1, 4.2, 4.6, 5.1, 5.3, 5.6, 6.1, 6.6)
	Use sequence, selection, and repetition in programs; work with variables and various forms of input and output	Use sequence in programs (3.1, 3.2, 4.1, 4.2, 4.3, 4.5, 5.1, 5.6, 6.1, 6.2)
		Use selection in programs (3.2, 4.1, 4.2, 4.5, 5.1, 5.6, 6.1, 6.2)
		Use repetition in programs (3.2, 4.1, 4.2, 4.3, 4.5, 5.1, 5.6, 6.1, 6.2)
		Work with variables (3.1, 3.2, 4.1, 4.2, 4.5, 4.6, 5.1, 5.6, 6.2)
		Work with various forms of input and output (3.1, 3.2, 4.1, 4.2, 4.3, 4.5, 4.6, 5.1, 5.6, 6.1, 6.2)
	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	Use logical reasoning to detect and correct errors in programs (3.1, 3.2, 4.1, 5.1, 5.2, 6.1, 6.2)
		Use logical reasoning to explain how some simple algorithms work (3.2, 4.1, 4.6, 5.1, 5.2, 6.1, 6.2)
		Use logical reasoning to detect and correct errors in algorithms (3.1, 3.2, 4.1, 5.1, 5.2, 6.1, 6.2)
Understand computer networks including the Internet; how they can	Understand how computer networks can provide multiple services, such as the World Wide Web (3.5, 3.6, 4.4, 5.2, 5.4, 6.3, 6.4)	

	<p>provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration</p>	<p>Understand computer networks, including the Internet (3.5, 3.6, 4.4, 5.2, 5.4, 6.3, 6.4)</p>
<p><b>Information Technology</b></p>	<p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>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</p>	<p>Use search technologies effectively (3.5, 4.6, 5.3, 5.5, 6.3, 6.4, 6.5)</p> <p>Appreciate how search results are selected (3.5, 4.6, 5.3, 6.3, 6.4, 6.5)</p> <p>Appreciate how search results are ranked (3.5, 4.6, 5.3, 6.3, 6.4, 6.5)</p> <p>Select, use and combine software (3.3, 3.4, 3.6, 4.3, 4.5, 4.6, 5.3, 5.4, 5.6, 6.3, 6.5, 6.6)</p> <p>Design and create content (3.3, 3.4, 3.6, 4.3, 4.4, 4.5, 4.6, 5.3, 5.4, 5.5, 5.6, 6.3, 6.5, 6.6)</p> <p>Design and create systems (3.3, 3.6, 4.6, 5.3, 5.4, 5.6, 6.3, 6.5, 6.6)</p> <p>Collect, analyse, evaluate and present data (3.6, 4.6, 5.4, 6.5, 6.6)</p> <p>Collect, analyse, evaluate and present information (3.3, 3.4, 4.4, 5.3, 5.4, 5.5, 5.6, 6.3, 6.5, 6.6)</p>
<p><b>Digital Literacy</b></p>	<p>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</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>	<p>Understand the opportunities computer networks offer for communication (3.5, 3.6, 4.4, 5.2, 5.4, 6.3, 6.4)</p> <p>Understand the opportunities computer networks offer for collaboration (3.5, 3.6, 4.4, 5.2, 5.4, 6.3, 6.4)</p> <p>Be discerning in evaluating digital content (3.5, 4.3, 4.6, 5.3, 5.4, 6.3, 6.4, 6.5)</p> <p>Use technology responsibly (3.3, 3.4, 3.5, 3.6, 4.3, 4.4, 5.2, 5.4, 5.5, 6.3, 6.4, 6.5)</p> <p>Identify a range of ways to report concerns about contact (3.5, 3.6, 4.3, 4.4, 5.2, 5.4, 6.5)</p> <p>Identify a range of ways to report concerns about content (3.5, 3.6, 4.3, 4.4, 5.2, 5.4, 6.4, 6.5)</p> <p>Recognise acceptable/unacceptable behaviour (3.5, 3.6, 4.3, 4.4, 5.2, 5.4, 6.4, 6.5)</p>