

Teacher Guide

Key Stage 1

A guide to the Teach Computing Curriculum

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Structure of the units of work

Every unit of work in the Teach Computing Curriculum contains: a unit overview; a learning graph, to show the progression of skills and concepts in a unit; lesson content –including a detailed lesson plan, slides for learners, and all the resources you will need; and formative and summative assessment opportunities.

Teach Computing Curriculum overview

Brief overview

	Computing systems and networks ¹	Creating media	Programming A	Data and information	Creating media	Programming B
Year 1	Technology around us (1.1)*	Digital painting (1.2)	Moving a robot (1.3)	Grouping data (1.4)	Digital writing (1.5)	Programming animations (1.6)
Year 2	Information technology around us (2.1)	Digital photography (2.2)	Robot algorithms (2.3)	Pictograms (2.4)	Digital music (2.5)	Programming quizzes (2.6)

¹ Networks are not part of the key stage 1 national curriculum for computing, but the title is used as a strand across primary

*The numbers in brackets are a 'quick code' reference for each unit, e.g. 1.3 refers to the third year one unit in the recommended teaching order.

Unit summaries

	Computing systems and networks	Creating media	Programming A	Data and information	Creating media	Programming B
Year 1	<p>Technology around us</p> <p>Recognising technology in school and using it responsibly.</p>	<p>Digital painting</p> <p>Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.</p>	<p>Moving a robot</p> <p>Writing short algorithms and programs for floor robots, and predicting program outcomes.</p>	<p>Grouping data</p> <p>Exploring object labels, then using them to sort and group objects by properties.</p>	<p>Digital writing</p> <p>Using a computer to create and format text, before comparing to writing non-digitally.</p>	<p>Programming animations</p> <p>Designing and programming the movement of a character on screen to tell stories.</p>
Year 2	<p>Information technology around us</p> <p>Identifying IT and how its responsible use improves our world in school and beyond.</p>	<p>Digital photography</p> <p>Capturing and changing digital photographs for different purposes.</p>	<p>Robot algorithms</p> <p>Creating and debugging programs, and using logical reasoning to make predictions.</p>	<p>Pictograms</p> <p>Collecting data in tally charts and using attributes to organise and present data on a computer.</p>	<p>Digital music</p> <p>Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.</p>	<p>Programming quizzes</p> <p>Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.</p>

National Curriculum Coverage – Years 1 and 2	1.1 Technology around us	1.2 Digital painting	1.3 Moving a robot	1.4 Grouping data	1.5 Digital writing	1.6 Programming animations	2.1 Information technology around us	2.2 Digital photography	2.3 Robot algorithms	2.4 Pictograms	2.5 Digital music	2.6 Programming quizzes
Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions.			✓			✓			✓			✓
Create and debug simple programs			✓			✓			✓			✓
Use logical reasoning to predict the behaviour of simple programs			✓			✓			✓			✓
Use technology purposefully to create, organise, store, manipulate, and retrieve digital content	✓	✓		✓	✓		✓	✓		✓	✓	✓
Recognise common uses of information technology beyond school	✓		✓				✓	✓				
Use technology safely and respectfully, keeping personal information private; identify on the internet or other online technologies	✓			✓	✓		✓	✓	✓	✓		

Progression

Progression through the taxonomy

Within the Teach Computing Curriculum, every year group learns through units within the same four themes, which combine the ten strands of the National Centre for Computing Education's taxonomy (see table, right). All learning objectives have been mapped to the strands, which ensures that units build on each other from one key stage to the next.

Teaching order

The order in which to teach units within a school year is not prescribed, other than for the two 'Programming' units for each year group, which build on each other. It is recommended that the 'Programming' and 'Creating media' units be revisited in two different terms within the school year, so that the concepts and skills can be revisited and consolidated. Otherwise, schools can choose the order in which they teach the units, based on the needs of their pupils and other topics or events that are happening throughout the school year, to make use of cross-curricular links wherever possible.

Primary themes	Computing systems and networks	Programming	Data and information	Creating media
Taxonomy strands	Computer systems	Programming	Data and information	Creating media
	Computer networks	Algorithms		Design and development
		Design and development		
		Effective use of tools		
	Impact of technology			
	Safety and security			

Software and hardware overview

Requirements for pupils - below

 Reflected in the unit screenshots

 Alternative software available

	Desktop or laptop	Chromebook	Tablet	Software or hardware
1.1 Technology around us	✓	✓	◆	paintz.app
1.2 Digital painting	✓	✓	◆	Microsoft Paint or similar
1.3 Moving a robot				Bee-bot or other floor robot
1.4 Grouping data	✓	✓		Google Slides or Microsoft PowerPoint
1.5 Digital writing	✓	✓	◆	Google Docs or Microsoft Word
1.6 Programming animations	◆	◆	✓	ScratchJr
2.1 Information technology around us	✓	✓		Google Slides or Microsoft PowerPoint
2.2 Digital photography	✓		◆	Digital camera
2.3 Robot algorithms				Bee-bot or other floor robot
2.4 Pictograms	✓	✓	◆	j2data Pictogram
2.5 Digital music	✓	✓	◆	Chrome Music Lab
2.6 Programming quizzes	◆	◆	✓	ScratchJr