Teach Computing Curriculum Map

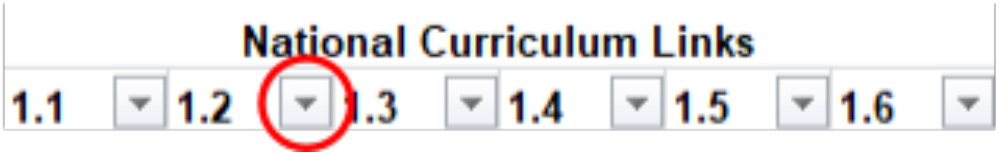
Welcome to the Teach Computing Curriculum Map. This document provides an overview of the units and lessons designed for students aged 7 to 11 (key stage 2). Additional mapping documents are available for teaching students of other ages at **teachcomputing.org/curriculum**.

Use this document to explore the curriculum, how it is structured, and most importantly, how it meets the objectives of the English national curriculum. You can also use this document to discover how the curriculum content connects to other frameworks such as Education for a Connected World and various exam specifications (where relevant).

You can also explore progression within the curriculum materials, as each objective is mapped to one or more of the ten strands within our content taxonomy. For example, if you want to understand how skills and concepts around networks are developed, you can do so by filtering your view to hide all objectives that are not related to networks.

On the next sheet, you'll find details of every unit, lesson, and learning objective, arranged in their suggested teaching order. Every column can be filtered to enable you to focus on what you want.

To filter a column, click the filter control button in the column header and select the desired data from the drop-down menu.



Statement Number	National Curriculum Statement
2.1	design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
2.2	use sequence, selection, and repetition in programs; work with variables and various forms of input and output
2.3	use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
2.4	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
2.5	use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
2.6	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
2.7	use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Teach Computing Taxonomy		
Abbreviation	**Strand**	**Description**
NW	Networks	Understand how networks can be used to retrieve and share information, and how they come with associated risks
CM	Creating Media	Select and create a range of media including text, images, sounds, and video
DI	Data & Information	Understand how data is stored, organised, and used to represent real-world artefacts and scenarios
DD	Design & Deveopment	Understand the activities involved in planning, creating, and evaluating computing artefacts
CS	Computing Systems	Understand what a computer is, and how its constituent parts function together as a whole
IT	Impact of Technology	Understand how individuals, systems, and society as a whole interact with computer systems
AL	Algorithms	Be able to comprehend, design, create, and evaluate algorithms
PG	Programming	Create software to allow computers to solve problems
ET	Effective Use of tools	Use software tools to support computing work
SS	Safety & Security	Understand risks when using technology, and how to protect individuals and systems

Year Group	Suggested Order	Unit Name	Lesson	Learning Objectives	Success Criteria	National Curriculum Links							Teach Computing Taxonomy									Cross Curricular Links	Education for a Connected World
						2.1	2.2	2.3	2.4	2.5	2.6	2.7	AL	CM	CS	DD	DI	ET	IT	NW	PG	SS		
6	1	Computing systems and networks - Communication and collaboration	1	-To explain the importance of internet addresses	-I can describe how computers use addresses to access websites - I can explain that internet devices have addresses - I can recognise that data is transferred using agreed methods				■		■	■						■		■				- Managing online information - Online reputation
6	1	Computing systems and networks - Communication and collaboration	2	-To recognise how data is transferred across the internet	-I can explain that all data transferred over the internet is in packets - I can explain that data is transferred over networks in packets - I can identify and explain the main parts of a data packet				■		■	■						■		■				- Managing online information - Online reputation
6	1	Computing systems and networks - Communication and collaboration	3	-To explain how sharing information online can help people to work together	-I can explain that the internet allows different media to be shared - I can recognise how to access shared files stored online - I can send information over the internet in different ways				■		■	■						■		■				- Managing online information - Online reputation
6	1	Computing systems and networks - Communication and collaboration	4	-To evaluate different ways of working together online	-I can explain how the internet enables effective collaboration - I can identify different ways of working together online - I can recognise that working together on the internet can be public or private				■		■	■						■	■	■				- Managing online information - Online reputation
6	1	Computing systems and networks - Communication and collaboration	5	-To recognise how we communicate using technology	-I can choose methods of communication to suit particular purposes - I can explain the different ways in which people communicate - I can identify that there are a variety of ways to communicate over the internet				■		■	■						■		■				- Managing online information - Online reputation
6	1	Computing systems and networks - Communication and collaboration	6	-To evaluate different methods of online communication	-I can compare different methods of communicating on the internet - I can decide when I should and should not share information online - I can explain that communication on the internet may not be private				■		■	■				■		■		■				- Managing online information - Online reputation
6	2	Creating media – Web page creation	1	-To review an existing website and consider its structure	-I can discuss the different types of media used on websites - I can explore a website - I know that websites are written in HTML					■	■	■		■		■				■				- Copyright and ownership - Online relationships
6	2	Creating media – Web page creation	2	-To plan the features of a web page	-I can draw a web page layout that suits my purpose - I can recognise the common features of a web page - I can suggest media to include on my page					■	■	■		■		■								- Copyright and ownership - Online relationships
6	2	Creating media – Web page creation	3	-To consider the ownership and use of images (copyright)	-I can describe what is meant by the term 'fair use' - I can find copyright-free images - I can say why I should use copyright-free images					■	■	■		■		■						■		- Copyright and ownership - Online relationships
6	2	Creating media – Web page creation	4	-To recognise the need to preview pages	-I can add content to my own web page - I can evaluate what my web page looks like on different devices and suggest/make edits - I can preview what my web page looks like					■	■	■		■		■		■						- Copyright and ownership - Online relationships
6	2	Creating media – Web page creation	5	-To outline the need for a navigation path	-I can describe why navigation paths are useful - I can explain what a navigation path is - I can make multiple web pages and link them using hyperlinks					■	■	■		■		■		■		■				- Copyright and ownership - Online relationships
6	2	Creating media – Web page creation	6	-To recognise the implications of linking to content owned by other people	-I can create hyperlinks to link to other people's work - I can evaluate the user experience of a website - I can explain the implication of linking to content owned by others					■	■	■		■		■		■	■	■				- Copyright and ownership - Online relationships
6	3	Programming A – Variables in games	1	-To define a 'variable' as something that is changeable	-I can explain that the way a variable changes can be defined - I can identify examples of information that is variable - I can identify that variables can hold numbers or letters	■	■	■			■										■			
6	3	Programming A – Variables in games	2	-To explain why a variable is used in a program	-I can explain that a variable has a name and a value - I can identify a program variable as a placeholder in memory for a single value - I can recognise that the value of a variable can be changed	■	■	■			■										■			
6	3	Programming A – Variables in games	3	-To choose how to improve a game by using variables	-I can decide where in a program to change a variable - I can make use of an event in a program to set a variable - I can recognise that the value of a variable can be used by a program	■	■	■			■					■					■			
6	3	Programming A – Variables in games	4	-To design a project that builds on a given example	-I can choose the artwork for my project - I can create algorithms for my project - I can explain my design choices	■	■	■			■					■					■			
6	3	Programming A – Variables in games	5	-To use my design to create a project	-I can choose a name that identifies the role of a variable - I can create the artwork for my project - I can test the code that I have written	■	■	■			■					■					■			
6	3	Programming A – Variables in games	6	-To evaluate my project	-I can identify ways that my game could be improved - I can share my game with others - I can use variables to extend my game	■	■	■			■					■					■			

6	4	Data and information – Spreadsheets	1	-To create a data set in a spreadsheet	-I can collect data - I can enter data into a spreadsheet - I can suggest how to structure my data	
6	4	Data and information – Spreadsheets	2	-To build a data set in a spreadsheet	-I can apply an appropriate format to a cell - I can choose an appropriate format for a cell - I can explain what an item of data is	
6	4	Data and information – Spreadsheets	3	-To explain that formulas can be used to produce calculated data	-I can construct a formula in a spreadsheet - I can explain which data types can be used in calculations - I can identify that changing inputs changes outputs	
6	4	Data and information – Spreadsheets	4	-To apply formulas to data	-I can apply a formula to multiple cells by duplicating it - I can calculate data using different operations - I can create a formula which includes a range of cells	
6	4	Data and information – Spreadsheets	5	-To create a spreadsheet to plan an event	-I can apply a formula to calculate the data I need to answer questions - I can explain why data should be organised - I can use a spreadsheet to answer questions	
6	4	Data and information – Spreadsheets	6	-To choose suitable ways to present data	-I can produce a chart - I can suggest when to use a table or chart - I can use a chart to show the answer to questions	
6	5	Creating media – 3D Modelling	1	-To recognise that you can work in three dimensions on a computer	-I can add 3D shapes to a project - I can move 3D shapes relative to one another - I can view 3D shapes from different perspectives	- Privacy and security
6	5	Creating media – 3D Modelling	2	-To identify that digital 3D objects can be modified	-I can lift/lower 3D objects - I can recolour a 3D object - I can resize an object in three dimensions	- Privacy and security
6	5	Creating media – 3D Modelling	3	-To recognise that objects can be combined in a 3D model	-I can duplicate 3D objects - I can group 3D objects - I can rotate objects in three dimensions	- Privacy and security
6	5	Creating media – 3D Modelling	4	-To create a 3D model for a given purpose	-I can accurately size 3D objects - I can combine a number of 3D objects - I can show that placeholders can create holes in 3D objects	- Privacy and security
6	5	Creating media – 3D Modelling	5	-To plan my own 3D model	-I can analyse a 3D model - I can choose objects to use in a 3D model - I can combine objects in a design	- Privacy and security
6	5	Creating media – 3D Modelling	6	-To create my own digital 3D model	-I can construct a 3D model based on a design - I can explain how my 3D model could be improved - I can modify my 3D model to improve it	- Privacy and security
6	6	Programming B - Sensing movement	1	-To create a program to run on a controllable device	-I can apply my knowledge of programming to a new environment - I can test my program on an emulator - I can transfer my program to a controllable device	
6	6	Programming B - Sensing movement	2	-To explain that selection can control the flow of a program	-I can determine the flow of a program using selection - I can identify examples of conditions in the real world - I can use a variable in an if, then, else statement to select the flow of a program	
6	6	Programming B - Sensing movement	3	-To update a variable with a user input	-I can experiment with different physical inputs - I can explain that checking a variable doesn't change its value - I can use a condition to change a variable	
6	6	Programming B - Sensing movement	4	-To use a conditional statement to compare a variable to a value	-I can explain the importance of the order of conditions in else, if statements - I can modify a program to achieve a different outcome - I can use an operand (e.g. <>=) in an if, then statement	
6	6	Programming B - Sensing movement	5	-To design a project that uses inputs and outputs on a controllable device	-I can decide what variables to include in a project - I can design the algorithm for my project - I can design the program flow for my project	
6	6	Programming B - Sensing movement	6	-To develop a program to use inputs and outputs on a controllable device	-I can create a program based on my design - I can test my program against my design - I can use a range of approaches to find and fix bugs