KS2 Computing Curriculum map

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
3	Connecting Computers	Stop-frame Animation	Sequence of music	Branching databases	Desktop publishing	Events and actions
	- To explain how digital devices function - To identify input and output devices - To recognise how digital devices can change the way we work - To explain how a computer network can be used to share information - To explore how digital devices can be connected - To recognise the physical components of a network	- To explain that animation is a sequence of drawings or photographs - To relate animated movement with a sequence of images - To plan an animation - To identify the need to work consistently and carefully - To review and improve animation - To evaluate the impact of adding other media to an animation	- To explore a new programming environment - I can identify that each sprite is controlled by the commands I choose - To explain that a program has a start - To recognise that a sequence of commands can have an order - To change the appearance of my project - To create a project from a task description	- To create question with yes/no answers - To identify the object attributes needed to collect relevant data - To create a branching database - To identify objects using branching database - To explain why it is helpful for a database to be well structured - To compare the information shown in a pictogram with a branching database	- To recognise how text and images convey information - To recognise that text and layout can be edited - To choose appropriate page settings - To add content to a desktop publishing publication - To consider how different layouts can suit different purposes - To consider the benefits of desktop publishing	- To explain how a sprite moves in an existing project - To create a program to move a sprite in four directions - To adapt a program to a new context - To develop my program by adding features - To identify and fix bugs in a program - To design and create a maze-base challenge
National Curriculum link	2.2 2.4 2.6	2.6	2.1 2.2 2.3	2.6	2.5 2.6	2.1 2.2 2.3 2.6

4	The Internet	Audio editing	Repetition in shapes	Data logging	Photo editing	Repetition in games

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	- To describe how networks physically connect to other networks - To recognise how networked devices make up the internet - To outline how websites can be shared via the World Wide Web - To describe how content can be added and accessed on the World Wide Web - To recognise how the content of the WWW is created by people - To evaluate the consequences of unreliable content	- To identify that sound can be digitally recorded: - To use a digital device to record sound: - To explain that a digital recording is stored as a file: - To explain that audio can be changed through editing: - To show that different types of audio can be combined and played together: - To evaluate editing choices made:	- To identify that accuracy in programming is important - To create a program in a text-based language - To explain what 'repeat' means - To modify a count-controlled loop to produce a given outcome - To decompose a program into parts - To create a program that uses count-controlled loops to produce a given outcome	- To explain that data gathered over time can be used to answer questions - To use a digital device to collect data automatically - To explain that a data logger collects 'data points' from sensors over time - To use data collected over a long duration to find information - To identify the data needed to answer questions - To use collected data to answer questions	- To explain that digital images can be changed - To change the composition of an image - To describe how images can be changed for different uses - To make good choices when selecting different tools - To recognise that not all images are real - To evaluate how changes can improve an image	- To develop the use of count-controlled loops in a different programming environment - To explain that in programming there are infinite loops and count controlled loops - To develop a design which includes two or more loops which run at the same time - To modify an infinite loop in a given program - To design a project that includes repetition - To create a project that includes repetition
National Curriculum link	2.4 2.5 2.6 2.7	2.5 2.6 2.7	2.1 2.2 2.3 2.6	2.2 2.6	2.5 2.6 2.7	2.1 2.2 2.3 2.6

5	Sharing information	Video editing	Selection in physical computing	Flat-file databases	Vector drawing	Selection in quizzes
	- To explain that computers can be connected together to form systems - To recognise the role of computer systems in our lives - To recognise how information is	- To recognise video as moving pictures, which can include audio - To identify digital devices that can record video - To capture video using a digital device	- To control a simple circuit connected to a computer - To write a program that includes count-controlled loops - To explain that a loop can stop when a	- To use a form to record information - To compare paper and computer-based databases - To outline how grouping and then sorting data allows us to answer questions	- To identify that drawing tools can be used to produce different outcomes - To create a vector drawing by combining shapes	- To explain how selection is used in computer programs - To relate that a conditional statement connects a condition to an outcome

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	transferred over the internet - To explain how sharing information online lets people in different places work together - To contribute to a shared project online - To evaluate different ways of working together online	- To recognise the features of an effective video - To identify that video can be improved through reshooting and editing - To consider the impact of the choices made when making and sharing a video	condition is met, eg number of times - To conclude that a loop can be used to repeatedly check whether a condition has been met - To design a physical project that includes selection - To create a controllable system that includes selection	- To explain that tools can be used to select specific data - To explain that computer programs can be used to compare data visually - To apply my knowledge of a database to ask and answer real-world questions	- To use tools to achieve a desired effect - To recognise that vector drawings consist of layers - To group objects to make them easier to work with - To evaluate my vector drawing	- To explain how selection directs the flow of a program - To design a program which uses selection - To create a program which uses selection - To evaluate my program
National Curriculum link	2.1 2.2 2.4 2.6 2.7	2.5 2.6 2.7	2.1 2.2 2.3 2.6	2.5 2.6	2.6	2.1 2.2 2.3 2.6

6	Communication	Web page creation	Variables in games	Introduction to spreadsheets	3D Modelling	Sensing
	- To identify how to use a search engine - To describe how search engines select results - To explain how search results are ranked - To recognise why the order of results is important, and to whom	- To review an existing website and consider its structure - To plan the features of a web page - To consider the ownership and use of images (copyright) - To recognise the need to preview pages - To outline the need for a navigation path	- To define a 'variable' as something that is changeable - To explain why a variable is used in a program - To choose how to improve a game by using variables - To design a project that builds on a given example	- To identify questions which can be answered using data - To explain that objects can be described using data - To explain that formula can be used to produce calculated data - To apply formulas to data, including duplicating	- To use a computer to create and manipulate three-dimensional (3D) digital objects - To compare working digitally with 2D and 3D graphics - To construct a digital 3D model of a physical object - To identify that physical objects can be broken down into a	- To create a program to run on a controllable device - To explain that selection can control the flow of a program - To update a variable with a user input - To use an conditional statement to compare a variable to a value - To design a project that uses inputs and

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	- To recognise how we communicate using technology - To evaluate different methods of online communication	- To recognise the implications of linking to content owned by other people	- To use my design to create a project - To evaluate my project	- To create a spreadsheet to plan an event - To choose suitable ways to present data	collection of 3D shapes - To design a digital model by combining 3D objects - To develop and improve a digital 3D model	outputs on a controllable device - To develop a program to use inputs and outputs on a controllable device
National Curriculum link	2.4 2.5 2.6 2.7	2.5 2.6 2.7	2.1 2.2 2.3 2.6	2.2 2.6	2.5 2.6 2.7	2.1 2.2 2.3 2.6

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.

National Centre for Computing Education

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).

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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.