

Clifton-upon-Teme Primary School Medium Term Plan

KS2 Computing – Cycle A

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

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

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National Curriculum Coverage Year 3/4

National Curriculum Coverage – Years 3 and 4	3.1 Connecting computers	3.2 Stop-frame animation	3.3 Sequencing sounds	3.4 Branching databases	3.5 Desktop publishing	3.6 Events and actions in programs	4.1 The internet	4.2 Audio production	4.3 Repetition in shapes	4.4 Data logging	4.5 Photo editing	4.6 Repetition in games
design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts			✓			✓			✓			✓
use sequence, selection, and repetition in programs; work with variables and various forms of input and output	✓		✓			✓			✓	✓		✓
use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs			✓			✓			✓			✓
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	✓						✓					
use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content					✓		✓	✓			✓	
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.		✓		✓			✓	✓			✓	

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National Curriculum Coverage Year 5/6

National Curriculum Coverage – Years 5 and 6							5.1 systems and searching	5.2 Video production	5.3 Selection in physical computing	5.4 Flat-file database	5.5 Introduction to vector graphics	5.6 Selection in quizzes	6.1 Communication and collaboration	6.2 Webpage creation	6.3 Variables in games	6.4 Introduction to spreadsheets	6.5 3D modelling	6.6 Sensing movement
design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts									✓			✓	✓		✓			✓
use sequence, selection, and repetition in programs; work with variables and various forms of input and output									✓			✓			✓			✓
use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs									✓			✓			✓			✓
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							✓						✓					
use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content								✓		✓				✓				
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							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.							✓	✓						✓	✓		✓	

Units of work covered in Cycle A are highlighted with Unit Summaries detailed below:

	Computing Systems and Networks	Creating Media	Programming A	Data and Information	Creating Media	Programming B
Year 3	Connecting computers (3.1)*	Stop-frame animation (3.2)	Sequencing sounds (3.3)	Branching databases (3.4)	Desktop publishing (3.5)	Events and actions in programs (3.6)
Year 4	The Internet (4.1)	Audio production (4.2)	Repetition in shapes (4.3)	Data logging (4.4)	Photo editing (4.5)	Repetition in games (4.6)
Year 5	Systems and searching (5.1)	Video production (5.2)	Selection in physical computing (5.3)	Flat-file databases (5.4)	Introduction to vector graphics (5.5)	Selection in quizzes (5.6)
Year 6	Communication and collaboration (6.1)	Web page creation (6.2)	Variables in games (6.3)	Spreadsheets (6.4)	3D modelling (6.5)	Sensing movement (6.6)

	Computing systems and networks	Creating media	Programming A	Data and information	Creating media	Programming B
Year 3	Connecting computers Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks	Stop-frame animation Capturing and editing digital still images to produce a stop frame animation that tells a story	Sequencing sounds Creating sequences in a block-based programming language to make music.	Branching databases Building and using branching databases to group objects using yes/no questions.	Desktop publishing Creating documents and modifying text, images and page layouts for a specific purpose.	Events and actions in programs Writing algorithms and programs that use a range of events to trigger sequences of actions.

	Computing systems and networks	Creating media	Programming A	Data and information	Creating media	Programming B
Year 5	Systems and searching Recognising IT systems in the world and how some can enable searching on the internet.	Video production Planning, capturing, and editing video to produce a short film.	Selection in physical computing Exploring conditions and selection using a programmable microcontroller.	Flat-file databases Using a database to order data and create charts to answer questions.	Introduction to vector graphics Creating images in a drawing program by using layers and groups of objects.	Selection in quizzes Exploring selection in programming to design and code an interactive quiz.

Software and hardware overview

Requirements for pupils - below

✓ Reflected in the unit screenshots

◆ Alternative software available

	Desktop or laptop	Chromebook	Tablet	Software or hardware
3.1 Connecting computers	✓	◆	◆	Painting program (any)
3.2 Stop-frame animation	◆	◆	✓	iMotion
3.3 Sequencing sounds	✓	✓	◆	Scratch
3.4 Branching databases	✓	✓	◆	J2data Branch and Pictogram
3.5 Desktop publishing	✓	✓	✓	Canva
3.6 Events and actions in programs	✓	✓	◆	Scratch
4.1 The internet	✓	✓	✓	Various websites
4.2 Audio production	✓	◆	◆	Audacity
4.3 Repetition in shapes	✓	◆	◆	FMS Logo
4.4 Data logging	✓	✓	✓	Data logger and associated software
4.5 Photo editing	✓	◆	◆	Paint.NET
4.6 Repetition in games	✓	✓	◆	Scratch

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