

# Brookhurst Primary Computing Long Term Overview

## Key Stage 1 Computing Overview



	<b>Unit 1</b>	<b>Unit 2</b>	<b>Unit 3</b>	<b>Unit 4</b>
<b>Year 1</b>	<b>Technology around us:</b> Recognising technology in school and using it responsibly.	<b>Moving a robot:</b> Writing short algorithms and programs for floor robots, and predicting program outcomes.	<b>Digital writing:</b> Using a computer to create and format text, before comparing to writing non-digitally.	<b>Programming animations:</b> Designing and programming the movement of a character on screen to tell stories.
<b>Year 2</b>	<b>Information technology around us:</b> Identifying IT and how its responsible use improves our world in school and beyond.	<b>Digital photography:</b> Capturing and changing digital photographs for different purposes.	<b>Robot algorithms:</b> Creating and debugging programs, and using logical reasoning to make predictions.	<b>Programming quizzes:</b> Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.

## Key Stage 2 Computing Overview

	<b>Unit 1</b>	<b>Unit 2</b>	<b>Unit 3</b>	<b>Unit 4</b>
<b>Year 3</b>	<p><b>Connecting computers:</b> Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.</p>	<p><b>Sequencing sounds:</b> Creating sequences in a block-based programming language to make music.</p>	<p><b>Desktop publishing:</b> Creating documents by modifying text, images, and page layouts for a specified purpose.</p>	<p><b>Events and actions in programs:</b> Writing algorithms and programs that use a range of events to trigger sequences of actions.</p>
<b>Year 4</b>	<p><b>The internet:</b> Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.</p>	<p><b>Repetition in shapes:</b> Using a text-based programming language to explore count-controlled loops when drawing shapes.</p>	<p><b>Photo editing:</b> Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.</p>	<p><b>Repetition in games:</b> Using a block-based programming language to explore count-controlled and infinite loops when creating a game.</p>
<b>Year 5</b>	<p><b>Systems and Searching:</b> Identifying and exploring how information is shared between digital systems.</p>	<p><b>Flat-file databases:</b> Using a database to order data and create charts to answer questions.</p>	<p><b>Introduction to vector graphics:</b> Creating images in a drawing program by using layers and groups of objects.</p>	<p><b>Selection in quizzes:</b> Exploring selection in programming to design and code an interactive quiz.</p>
<b>Year 6</b>	<p><b>Communication and collaboration:</b> Recognising how the WWW can be used to communicate and be searched to find information</p>	<p><b>Webpage creation:</b> Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.</p>	<p><b>Variables in games:</b> Exploring variables when designing and coding a game.</p>	<p><b>Introduction to spreadsheets:</b> Answering questions by using spreadsheets to organise and calculate data.</p>

National Curriculum Coverage — Years 1 and 2	1.1 Technology Around Us	1.2 Moving a Robot	1.3 Digital Writing	1.4 Programming Animations	2.1 Information Technology Around Us	2.2 Digital Photography	2.3 Robot Algorithms	2.4 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 where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	✓		✓		✓	✓	✓	

National Curriculum Coverage — Years 3 and 4	3.1 Connecting Computers	3.2 Sequencing Sounds	3.3 Desktop Publishing	3.4 Events and Actions in Programs	4.1 The Internet	4.2 Repetition in Shapes	4.3 Photo Editing	4.4 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	✓	✓	✓	✓	✓	✓	✓	✓

<b>given goals, including collecting, analysing, evaluating and presenting data and information.</b>							
<b>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</b>							

National Curriculum Coverage — Years 5 and 6	5.1 Systems and Searching	5.2 Flat-file Databases	5.3 Introduction to Vector Graphics	5.4 Selection in Quizzes	6.1 Communication and Collaboration	6.2 Web Page Creation	6.3 Variables in Games	6.4 Introduction to Spreadsheets
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.		✓				✓		

<b>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.</b>	✓	✓	✓	✓	✓	✓	✓	✓
<b>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</b>	✓					✓	✓	