Broomgrove Junior School
Computing Progression Grid

At Broomgrove, we have adopted The Teach Computing Curriculum which uses the National Centre for Computing Education's computing taxonomy to ensure comprehensive coverage of the subject. This has been developed through a thorough review of the KS1–4 computing programme of study. The computing units are based on a spiral curriculum. This means that each of the themes is revisited regularly (at least once in each year group), and pupils revisit each theme through a new unit that consolidates and builds on prior learning within that theme. This style of curriculum design reduces the amount of knowledge lost through forgetting, as topics are revisited yearly. It also ensures that connections are made even if different teachers are teaching the units within a theme in consecutive years.

National Curriculum Coverage	
At Lower Key Stage Two	**At Upper Key Stage Two**
• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **(Unit 3.3, 3.6, 4.3, 4.6)** • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output **(Unit 3.1, 3.3, 3.6, 4.3, 4.4, 4.6)** • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **(Unit 3.3, 3.6, 4.3, 4.6)** • 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 **(Unit 3.1, 4.1)** • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content **(Unit 3.5, 4.1, 4.2, 4.5)** • 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 **(Unit 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6)** • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact **(Unit 3.2, 3.4, 4.1, 4.2, 4.5)**	• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **(Unit 5.3, 5.6, 6.1, 6.3, 6.6)** • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output **(Unit 5.3, 5.6, 6.3, 6.6)** • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **(Unit 5.3, 5.6, 6.3, 6.6)** • 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 **(Unit 5.1, 6.1)** • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content **(Unit 5.2, 5.4, 6.2)** • 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 **(Unit 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6)** • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact **(Unit 5.1, 5.2, 6.2, 6.3, 6.5)**

Unit Summaries						
	Computing systems and networks	**Creating media**	**Programming A**	**Data and Information**	**Creating Media**	**Programming B**
Year 3	**3.1 Connecting computers** Children will: • identify that digital devices have inputs, processes, and outputs • know how devices can be connected to make networks.	**3.2 Stop-frame animation** Children will: • capture and edit digital still images to produce a stop-frame animation that tells a story.	**3.3 Sequencing sounds** Children will: • create sequences in a block-based programming language to make music.	**3.4 Branching databases** Children will: • build and use branching databases to group objects using yes/no questions.	**3.5 Desktop publishing** Children will: • create documents by modifying text images and page layouts for a specified purpose.	**3.6 Events and actions in programs** Children will: • write algorithms and programs that use a range of events to trigger sequences of actions.
Year 4	**4.1 The internet** Children will: • recognise the internet as a network of networks including the WWW • why we should evaluate online content.	**4.2 Audio production** Children will: • capture and edit audio to produce a podcast, ensuring that copyright is considered.	**4.3 Repetition in shapes** Children will: • use a text-based programming language to explore count-controlled loops when drawing shapes.	**4.4 Data logging** Children will: • recognise how and why data is collected over time • use data loggers to carry out an investigation.	**4.5 Photo editing** Children will: • manipulate digital images and reflect on the impact of changes and whether the required purpose is fulfilled.	**4.6 Repetition in games** Children will: • use a block-based programming language to explore count-controlled and infinite loops when creating a game.
Year 5	**5.1 Systems and searching** Children will: • recognise IT systems in the world and how some can enable searching in the internet.	**5.2 Video production** Children will: • plan, capture and edit video to produce a short film.	**5.3 Selection in physical computing** Children will: • explore conditions and selection using a programmable microcontroller.	**5.4 Flat-file databases** Children will: • use a database to order data and create charts to answer questions.	**5.5 Introduction to vector graphics** Children will: • create images in a drawing program by using layers and groups of objects.	**5.6 Selection in quizzes** Children will: • explore selection in programming to design and code an interactive quiz.
Year 6	**6.1 Communication and collaboration** Children will: • explore how data is transferred by working collaboratively online.	**6.2 Webpage creation** Children will: • design and create webpages, giving consideration to copyright, aesthetics and navigation.	**6.3 Variables in games** Children will: • explore variables when designing and coding a game.	**6.4 Introduction to spreadsheets** Children will: • answer questions by using spreadsheets to organise and calculate data .	**6.5 3D modelling** Children will: • plan, develop and evaluate 3D computer models of physical objects.	**6.6 Sensing movement** Children will: • design and code a project that captures inputs from a physical device.