The Computing Curriculum Long Term Plan

at Pitmaston Primary School

Each unit of work contains a unit overview, progression of skills and concepts and the lesson content.

EYFS	In the Early Years the focus is on computational thinking and the 'unplugged approach' through the concepts: Logic, Evaluation, Algorithms and Decompositions, Patterns and Extraction and approaches: Tinkering, Creating, De-bugging, Persevering and Collaborating.					
Key Stage One	Computing Systems and Networks	Creating Media	Programming A	Data and Information	Creating Media	Programming B
Year 1	**Technology around us** Recognising technology in school and using it responsibly.	**Digital Painting** Choosing appropriate tools in a programme to create art, and making comparisons with working non-digitally.	**Moving a robot** Writing short algorithms and programs for floor robots, and predicting program outcomes.	**Grouping Data** Exploring object labels, then using them to sort and group objects by properties.	**Digital writing** Using a computer to create and format text, before comparing to writing non-digitally.	**Programming animations** Designing and programming the movement of a character on screen to tell stories.
Year 2	**Information technology around us** Identifying IT and how its responsible use improves our world in school and beyond.	**Digital Photography** Capturing and changing digital photographs for different purposes.	**Pictograms** Collecting data in tally charts and using attributes to organise and present data on a computer.	**Pictograms** Collecting data in tally charts and using attributes to organise and present data on a computer.	**Making music** Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.	**Programming quizzes** Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.

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Key Stage Two	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 by modifying text, images, and page layouts for a specified purpose.	**Events and actions in programs** Writing algorithms and programs that use a range of events to trigger sequences of actions.
Year 4	**The internet** Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.	**Audio production** Capturing and editing audio to produce a podcast, ensuring that copyright is considered.	**Repetition in shapes** Using a text-based programming language to explore count-controlled loops when drawing shapes.	**Data logging** Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	**Photo editing** Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.	**Repetition in games** Using a block-based programming language to explore count-controlled and infinite loops when creating a game.

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Key Stage Two	Computing Systems and Networks	Creating Media	Programming A	Data and Information	Creating Media	Programming B
Year 5	**Systems and searching** Recognising IT systems around us and how they allow us to search 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.	**Vector drawing** 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.
Year 6	**Communication and collaboration** Identifying and exploring how data is transferred and information is shared online.	**Webpage creation** Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.	**Variables in games** Exploring variables when designing and coding a game.	**Introduction to spreadsheets** Answering questions by using spreadsheets to organise and calculate data.	**3D modelling** Planning, developing and evaluating 3D computer models of physical objects.	**Sensing** Designing and coding a project that captures inputs from a physical device.