Whitehill Junior School Computing Curriculum
Overview and information 2020 – Updated February 2022

At Whitehill, we aim to enthuse and encourage our children to develop their interest in all aspects of the computing world. We offer a broad range of units across all four year groups that build on and develop understanding from previous years.

We believe that this approach will allow our children to understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. The quality teaching of coding will allow everyone to be able to analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.

At Whitehill, we embrace all new technologies, but it is also important to look at the old and the unfamiliar. This allows our children to become familiar with real world situations where different technologies and platforms are used within industry. It also allows them to evaluate the different technologies that maybe available for them to use and then they can best chose the solution that is right for them as individuals, to help them the problems they face.

E-Safety and creativity are at the core of what we do and it is our aim to produce competent, confident and creative users of information and communication technology.

	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. *Moved to Year 4 to fit with Rocks & soils science topic*	**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 editing** Capturing and editing audio to produce a podcast, ensuring that copyright is considered. ** Moved to Year 3 to fit in with the Big Dig*	**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.
Year 5	**Sharing information** Identifying and exploring how information is shared between digital systems.	**Video editing** 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	**Internet communication** Recognising how the WWW can be used to communicate and be searched to find information.	**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.