The Pochin School Computing Overview

We are following the Teach Computing curriculum. It is rigorous, challenging and aims to develop computing beyond programming.

All learning outcomes can be described through a high-level taxonomy of ten strands, ordered alphabetically as follows:

- Algorithms — Be able to comprehend, design, create, and evaluate algorithms
- Computer networks — Understand how networks can be used to retrieve and share information, and how they come with associated risks
- Computer systems — Understand what a computer is, and how its constituent parts function together as a whole
- Creating media — Select and create a range of media including text, images, sounds, and video
- Data and information — Understand how data is stored, organised, and used to represent real-world artefacts and scenarios
- Design and development — Understand the activities involved in planning, creating, and evaluating computing artefacts
- Effective use of tools — Use software tools to support computing work
- Impact of technology — Understand how individuals, systems, and society as a whole interact with computer systems
- Programming — Create software to allow computers to solve problem
- Safety and security — Understand risks when using technology, and how to protect individuals and systems

The units for key stages 1 and 2 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. To ensure children are taught knowledge and skills in a progressive way, by skilled and knowledgeable practitioners, the units are not organised on a rolling programme but by Class. Where the mixed age groupings within school enables children to revisit a theme, a range of stretch and challenge tasks are provided to ensure the development of children's understanding and skills at a level beyond that of children visiting the unit for the first time.

E safety is of paramount importance and is taught not only in Computing lessons but as part of PSHE and Citizenship teaching and when using technology to facilitate learning in other curriculum areas.

The Pochin School — ICT overview 2021-2022

Class 1	Class 2	Class 3	Class 4	Class 5
Technology around us Recognising technology in school and using it responsibly.	**Information Technology around us** Identifying IT and how its responsible use improves our world in school and beyond.	**The internet** Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.	**Sharing information** (5) Identifying and exploring how information is shared between digital systems.	**Communication** Recognising how the WWW can be used to communicate and be searched to find information.
Digital Painting Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.	**Digital Photography** Capturing and changing digital photographs for different purposes.	**Creating media animation** Capturing and editing digital still images to produce a stop-frame animation that tells a story.	**Audio editing** Capturing and editing audio to produce a podcast, ensuring that copyright is considered.	**Web page creation** Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.
Moving a robot Writing short algorithms and programs for floor robots, and predicting program outcomes.	**Robot Algorithms** Creating and debugging programs, and using logical reasoning to make predictions.	**Sequence in music** Creating sequences in a block-based programming language to make music.	**Repetition in shapes** Using a text-based programming language to explore count-controlled loops when drawing shapes	**Variables in games** Exploring variables when designing and coding a game. Answering questions by using spreadsheets to organise and calculate data.
Grouping Data Exploring object labels, then using them to sort and group objects by properties.	**Pictograms** Collecting data in tally charts and using attributes to organise and present data on a computer.	**Branching databases** Building and using branching databases to group objects using yes/no questions.	**Data and information- datalogging** Recognising how and why data is collected over time, before using data loggers to carry out an investigation	**Intro to spreadsheets** Exploring variables when designing and coding a game. Answering questions by using spreadsheets to organise and calculate data.
Digital Writing Using a computer to create and format text, before comparing to writing non-digitally.	**Making Music** Using a computer as a tool to explore rhythms and melodies, before creating a musical composition	**Desktop publishing** Desktop publishing Creating documents by modifying text, images, and page layouts for a specified purpose.	**Creating media- photo editing** Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.	**3D modelling** Planning, developing, and evaluating 3D computer models of physical objects.
Programming Animations Designing and programming the movement of a character on screen to tell stories	**An Introduction to Quizzes** Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz	**Events and actions** Writing algorithms and programs that use a range of events to trigger sequences of actions	**Repetition in games** Using a block-based programming language to explore count-controlled and infinite loops when creating a game.	**Sensing** Designing and coding a project that captures inputs from a physical device