

KS 3 Year 7 Computing Curriculum

Unit	Description
E-Safety & Cloud Computing	During this unit pupils learn about a wide range of e-safety topics, presentation skills and how to collaborate with each other. They spend the first part of the unit learning about potential risks of using technology and ways to reduce these risks. They then collaboratively produce a presentation demonstrating what they have learnt. This unit also acts as an introduction to the school computers, Google Drive and cloud computing.
Computational Thinking	This unit has been designed to embed a range of the key computational thinking concepts that are vital to success in Computer Science. The first section of this unit uses the MSWlogo software to teach sequencing, variables and iteration. Subsequent lessons looked at more theoretical computational thinking concepts such as designing algorithms for sorting and searching. The final lesson of this unit is a formal written assessment, in which pupils demonstrate the knowledge and understanding that they have developed over the unit.
Scratch	Scratch provides an excellent environment in which pupils can start creatively using computational thinking concepts. Initial lessons are relatively structured in terms of the outcome. This gives an opportunity to show pupils how to use the software and how computational thinking concepts can be implemented. After this pupils are given more freedom in terms of what they can create. This allows them to really express their creativity.
Flowol	This unit develops pupils' skills in designing algorithms using flowcharts which is a key element in GCSE Computer Science. This unit on control of systems allows pupils to develop logical reasoning and problem solving talents, develop programming skills and explore the world of automatic, autonomous systems and robots.
Spreadsheet Modelling	Spreadsheet modelling is a key topic of ICT. It is therefore very important that pupils get a good grounding in the topic to help prepare them for KS4 courses in ICT. Lessons are spent building up pupils' spreadsheet skills and knowledge. This includes covering topics such as spreadsheet fundamentals, formulae, functions and modelling. In the final lesson pupils sit a practical assessment in which they have to demonstrate the skills and knowledge they have developed over the unit.