Computing Key Stage 3

All pupils receive one dedicated computing lesson a week.

Year 7 content

Autumn Term
• Scratch *Building on programming skills previously learnt in key stage 2* • Binary and Python *Developing computing knowledge about Binary and introduction to programming language Python*
Spring Term
• Spreadsheet skills *Building on spreadsheet skills previously learnt in key stage 2, looking at formula and charts* • Micro Bits *Programming the Micro bits – investigating a variety of different programming techniques*
Summer Term
• Micro Bits *Programming the Micro bits – investigating a variety of different programming techniques* • Digital Media *Developing a digital media product to promote online safety.*

Year 8 content

Autumn Term
• Binary, Hexadecimal and Python *Developing computing knowledge about Binary, Hexadecimal and building of previous learning of Python programming language* • Flowol *Developing knowledge about algorithms and investigating flowcharts, the symbols used and creating flowcharts for different scenarios.*
Spring Term
• Micro Bits *Programming the Micro bits – investigating a variety of different programming techniques* • Computing past, present and future *Develop an understanding about the history of computing, how it has developed today and how it is developing into the future.*
Summer Term
• Website Creation (HTML) *Developing website creation skills. Pupils will create a website for a specific scenario thinking about target audience*

Year 9 content

Autumn Term
• Python *Developing python programming knowledge and skills. Building on previous knowledge learnt in year 8* • Computational Thinking *Developing an understanding about thinking like an electronic device and understanding how they work. Learning about flowcharts and pseudocode*
Spring Term
• Computing Components & Ethics *Develop an understanding as to how computers work and investigating the components within a computer. Looking at the ethics of computing investigate a range of morale dilemma's surrounding computing* • Cyber Security *Develop an understanding about the difference between data and information looking at the potential threats to computer systems, both ones caused by humans and ones caused by internet bots. Understand how to protect systems that are under attack and methods of protection for computer systems.*
Summer Term
• App Development *Using App creating software, design and develop a fully working App for a device*

Approaches to Teaching and Learning within Computing.

The department builds on improving the pupil's computing skills by using a variety of different teaching and learning methods:

- Peer and self – assessment.
- Verbal and written feedback.
- Teacher and pupil skills demonstrations.
- Risk – taking when using a variety of different programming languages.
- Collaborative learning activities