



Computing: Year 7 Overview

Block 1: Digital Skills

Initially students learn 'what is computing?' They are then introduced to the FBS network, Firefly, and the Cloud system and applications that we can use. They are asked 'what is the internet and is it the same as the world wide web?' They are introduced to laws that surround computing like health and safety, and the computer misuse act. They are then encouraged to look at E-Safety and staying safe online.

Block 2: Computer Systems

Students are asked 'what is a computer?' They are then introduced to the input/output process storage memory model. Each subsequent lesson focuses on an area of the model; input/output; memory, storage; and process. Students are also encouraged to discuss hardware and software covering memory, storage, CPU and types of software

Block 3: Computational Thinking

This is a very practical unit for our year 7s as they begin using Flowol software. This then opens up the question 'what is a flow chart?' Students are systematically introduced to the flow chart symbols and what they mean, using flowcharts to design systems and using flowcharts that link to algorithmic thinking. Students create a flowchart algorithm for simple traffic lights, zebra crossings and a house that has a number of automatic systems like heaters and lights.

Binary Maths

Students are introduced to the question 'what is binary?' They are then taught how to convert decimal to binary and vice versa. Also covered are binary maths, binary addition and binary overflow - students are encouraged to discover WHY we look at binary and the fact a computer needs to convert text, image, sound and video to binary.

Block 4: Programming - Scratch programming

Students are introduced to scratch programming. High level and low-level programming concepts are introduced too. The notion of sequence, selection, loops, and students creating small interactive programmes is introduced here

Python programming

Year 7 students are introduced to script-based programming. The students are encouraged to understand variables, using loops, making choices in python, exploring data types.