



KS3 Curriculum Overview

Year 7

During Year 7 students cover the following topics:

Autumn Term

Introduction – This unit prepares pupils to use the technology that will support their learning in Year 7 and beyond. We look at password security, email, show my homework, google drive, input and output devices, how to print in school, how to search the internet and then an introduction to copyright and plagiarism.

E-Safety - Within this unit pupils are taught how to keep themselves safe online and when using a computer. We look at how cyberbullying affects an individual and what to do if someone is being cyberbullied. We look at social media and discuss the advantages and disadvantages of such technologies. Pupils look at netiquette and how they are leaving a digital footprint.

Spring Term

Spreadsheets - Pupils learn the basics of spreadsheets in order to analyse data. They look at basic formulas and functions and learn how to display information in graphs.

Cryptology and Flowal - This unit looks at how data is secured on a computer using cryptography. Pupils also look at how algorithms can be represented using flow charts.

Summer Term

Scratch (Block Based Programming) - Within this unit pupils look at computational thinking and learn block programming to create a game. Pupils learn about Cartesian coordinates, IF statements, Forever loops and then move onto variables. Pupils learn about sequence, selection and iteration.

Introduction to text based programming - This is pupils' first introduction to text based programming. In this unit pupils learn the syntax of python and develop programming skills that require accuracy and problem solving.

Year 8

During Year 8 students develop their knowledge of computing and cover the following topics:

Autumn Term

HTML - Pupils learn to program for the web by using HTML to create a website. They learn about tags and how to structure a webpage. Skills learn include formatting text, use of colour (including RGB colour chart) tables and hyperlinks.

Web Authoring - Pupils move from text based programming of a website to using an editor to develop a webpage. They learn more advanced features and focus on audience needs and purpose alongside accessibility features to make the website more usable.

Spring Term

Python - Within this unit pupils develop their understanding of Python to further understand variables and data types. Pupils build upon knowledge of iteration (loops) to make more efficient programs.



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Animation and Video Editing - Pupils look at how animations are created using frames and layers. They learn about frame rate. This develops onto using transitions to create a video for a target audience.

Summer Term

Spreadsheets - This unit looks at developing spreadsheet skills to enable pupils to ask 'what if' questions to a model. Work develops to look at naming cell ranges, sorting data, vlookups and other more advanced skills such as writing macros and protecting the cells.

Database (Flat File) - It is important that pupils understand how data is stored. This unit explains this and teaches pupils how to create and use a database that they can search to find the information that they require.

Year 9

During Year 9 students further refine their understanding of computers by studying the following topics:

Autumn Term

Bitmap Editing - In this unit the focus is on how to edit images for a particular audience. Pupils learn that images that they see are not necessarily real as they may have been edited. There is also a focus on the types of files that can be used for images and the differences between them including file compression.

Coding (Data Representation) - This unit looks at how a computer stores text, images and sound as binary values. It looks at how data is stored (compressed) using different methods. Pupils look at how analogue sound files are sampled into digital sound files.

Spring Term

Database (Relational) – This unit looks at developing pupils' understanding of databases and teaches the use of relational databases to show how information can be retrieved from more than one related table.

Python - Pupils' knowledge of python is further developed by learning how to read and write to txt files. They develop skills in handling data in Python and being able to question the data to find answers. Additionally pupils learn how to search and sort data effectively using Linear and Binary searches and bubble and merge sorts. Pupils also learn about how computers hold data in arrays.

Summer Term

Integrated Project - The final double unit brings together many aspects of computing where pupils develop an understanding of the system lifecycle by planning, Researching, Designing, Implementing and reviewing a large project. They use tools learnt throughout KS3 to help them undertake this task such as the use of spreadsheets and databases to create financial models and store information.