



Computing



Archdiocese of Liverpool

Curriculum intent:

The Computer Science Department intends to equip all pupils to use computational thinking and creativity when understanding the modern world. We understand that Computer Science has deep links to Mathematics, Science and Design and Technology. We aim to build on this and teach the principles of Information and Computation.

We equip pupils to use Information Technology to create programs, systems and a range of content. Computing ensures that pupils become digitally literate at a level suitable for the future workplace and as active participants in a digital world.

Year 8

TERM 1

Content

Understanding Computers

This is a theoretical unit covering the basic principles of computer systems architecture.

Networks

This unit enables pupils to understand the basic principles of networking architectures.

Concepts and Skills

- Elements of a computer system, the CPU. understanding binary, binary addition, storage devices, convergence and new technologies.
- Understanding the internet.
- Types of connectivity.
- Network topologies.
- Use of encryption.

TERM 2

Spreadsheet Modelling

This unit builds pupil's skills in the creation of financial models.

Database Development

This unit builds pupil's skills in the creation & customisation of databases.

- Spreadsheet modelling.
- Use of formulae & functions for arithmetic.
- Conditional formatting & validation.
- Use of tables & table structures.
- Searching a database using queries.
- Creating & customising input forms.
- Generating reports & testing.

TERM 3

Introduction to Python

This unit further develops pupil's knowledge & skills in their use of Python.

App Development

This unit equips pupils with the knowledge & skills needed to create an app.

- Use of strings & variables.
- Programming numbers & arithmetic.
- Writing algorithms that include selection.
- While loops & searching.
- Introduction to app's & their programming.
- Home screens, navigation & links.
- Images, map functions & publishing.

