



Computer Science



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 11

Content

Unit 6 - Algorithms

This unit develops students' computational thinking, using abstraction and decomposition. Practical experience is provided for writing, tracing and modelling algorithms.

Unit 7 - Programming

This programming unit covers the basic programming constructs as well as string manipulation and file handling.

Unit 8 - Logic and Languages

This unit explores the fundamentals of using logic within programming languages. Beginning with Boolean logic diagrams and truth tables the unit introduces the common functions of an IDE and programming language classifications

Revision

Revision

This time will be used to go back over key concepts taught and target any areas of misconception/weakness.

Concepts and Skills

- Computational thinking.
- Searching and sorting algorithms.
- Developing algorithms using flowcharts and pseudocode.
- Interpreting and correcting algorithms.
- Programming fundamentals.
- Sequence, selection and iteration.
- Arrays, records and files.
- Procedures, functions and SQL.

- Logic diagrams & truth tables.
- Defensive design.
- Errors & testing.
- Translators & facilitators.
- The Integrated Development Environment.

- Use of past paper questions.
- Develop examination techniques.
- Production of revision mind maps.
- Development of revision techniques.
- Production of revision materials.

TERM 1

TERM 2

TERM 3

