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 9

	Content	Concepts and Skills
TERM 1	**Computer Crime & Cyber Security** This unit gives an overview of cyber threats, safeguarding against attacks & legislation. **Database Development** This unit builds pupil's skills in the creation & customisation of databases.	• Develop an awareness of email scams, hacking & how to protect personal data. • Become aware of the laws relating to Computer Misuse, Data Protection & Copyright. • Use of tables & table structures. • Searching a database using queries. • Creating & customising input forms. Genertating reports & testing
TERM 2	**AI and Machine Learning** An insight into the fascinating world of AI and Machine Learning. Students explore the world of self-driving cars, facial recognition and the ethics of using AI **HTML & Website Development** This unit explores the fundamentals of HTML based web design.	• What is AI and Machine Learning • The ethics of AI • Image recognition and suggestive AI • Page creation & use of master page templates. • Navigation structures & menu design. • Use of interactive components & testing.
TERM 3	**Modelling in Small Basic** This unit covers the topic of modelling, using a programming language designed to make programming easy and approachable. **Python Next Steps** This unit enables pupils to enhance their use of this text based programming language.	• Understanding selection. • Understanding iteration. • Subroutines and modular programming. • Programming of loops & implementing lists. • Embedded use of procedures & functions.