COMPUTING

BTEC

Why study Computing at Formby High School?

Computing is relevant to the modern, changing world we live in. It is a practical subject where students learn to apply the principles learned in the classroom to real-world systems. Students will undertake to plan, design and program their own systems to solve problems and meet the needs of various situations. Computing helps students to develop the skills to solve problems, design systems and understand the power and limits of human and machine intelligence. The ability to express yourself precisely and to think through each problem, as it is encountered, are qualities that are encouraged and will develop throughout the course.

Students will be able to think analytically and understand the consequences of using computers in terms of the social, legal and ethical issues surrounding them. Students will benefit from an understanding of Mathematics but a logical mind will be the most distinct advantage. Computing is an exciting and engaging subject which is designed to provide a challenge that will ultimately prepare students for real world situations that they will encounter in a modern, digitally literate society.

What does the course involve?

The course is made up of four units:

- Unit 1: Principles of Computer Science
- Unit 2: Fundamentals of Computer Systems
- Unit 7: IT Systems Security and Encryption
- Unit 14: Computer Games Development

'**Principles of Computer Science**' focuses on the algorithms and programming aspects of the subject, developing students' computational and thinking skills.

'**Fundamentals of Computer Systems**' investigates the way individual components function and how hardware and software work in tandem within a digital system.

'**IT Systems Security and Encryption**' takes a detailed look at the vulnerabilities of networked systems and how different encryption methods can be used to protect data.

'**Computer Games Development**' allows each student to use their own skills and imagination to design, develop, test and evaluate a working computer game of their own.

What can the qualification lead to?

Computing provides a number of transferable skills that are useful throughout many professions. As digital media, the internet and reliance upon computing becomes more prevalent, the demand for educated individuals with a well-rounded knowledge of this field will also increase. Many students go on to study Computing, or related courses, at university and can pursue careers in such professions as:

- Computer game design
- Programming
- Web design
- Software engineering
- Systems analysis

What are the entry requirements?

Grade 6 in GCSE Computer Science and grade 6 in GCSE Mathematics.

Which other subjects complement Computing?

- Digital Media
- Mathematics

I really enjoy Computing. It gives you the chance to work together with others to solve problems, learning to code and write my own software. One of my favourite parts has been Computer Game Design where I've learned about the history of gaming and what I could put into my own game. I'm looking forward to the Security and Encryption unit where we set up our own secure network. The fact that it's split between coursework and examinations takes a lot of pressure off at the end of the year.

Archie chose to stay at Formby High for Sixth Form