



Computer Science is a rapidly changing and exciting discipline which underpins almost everything you can think of in society. In a nutshell, GCSE Computer Science explores the principles of digital technology and its applications. Students who take this course will develop programming skills in Java and Python and understand how computers work as opposed to the Creative Computing qualification which focuses on the creation of digital products without needing to know how they are produced. Students will be inspired and challenged by a range of computer-related topics.

The topics covered in Computer Science are aimed to give students an overview of the various career pathways available in the Computer Science industry, ranging from Software Development, Engineering to even Cyber Security. Over the length of this course, students will develop the core skills to begin the next steps on their journey to a Computer Science career led pathway.

### **Year 9 Computer Science** (OCR GCSE)

Year 9 serves as an introductory year to Computer Science GCSE and students will focus on a range of topics from the following:

- Data Representation
- Computational Thinking
- Algorithms
- Programming techniques
- Translators and Facilities of Languages, IDEs
- Computational Logic
- NEA project prep
- Ethical, Cultural and Legal issues

### **Year 10 Computer Science** (OCR GCSE)

Year 10 focuses more specifically on exam content ranging from the following topics:

- Programming Techniques
- System Architecture
- Memory
- Secondary Storage
- Wired vs Wireless
- Network Topologies, protocols and layers
- Producing Robust Algorithms, Computing Logic
- System Security
- System Software
- Ethical, Cultural and Legal issues



## **Year 11 Computer Science** (OCR GCSE)

In Year 11, students recap all the content they have covered to date, this is done using a **Diagnosis, Therapy, Retest** approach to ensure students develop a full understanding in each of the following topics:

- **Data Representation**
- **Computational Thinking**
- **Algorithms**
- **Programming techniques**
- **Translators and Facilities of Languages, IDEs**
- **Computational Logic**
- **Non-Exam Assessment (NEA) project completion**
- **Ethical, Cultural and Legal issues**
- **System Architecture**
- **Memory**
- **Secondary Storage**
- **Wired vs Wireless**
- **Network Topologies, protocols and layers**
- **Programming Techniques, Producing Robust Algorithms, Computing Logic**
- **System Security**
- **System Software**
- **Ethical, Cultural and Legal issues**

