

Computer Science

HOLYROOD
ACADEMY



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Overview of GCSE Computer Science

What will I learn?

- How computers and computer systems work
- Networks, security and protocols
- How computers are designed, built and programmed
- Developing computational thinking
- Programming in Python
- Making use of technology for real life situations
- It encourages problem solving and gives knowledge and skills to understand and interact in a technological world

What is the structure of this Computer Science?

J277/01: Computer systems

Written paper: 1 hour and 30 minutes 50% of total GCSE 80 marks

J277/02: Computational thinking, algorithms and programming

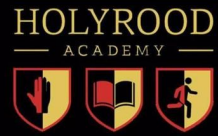
Written paper: 1 hour and 30 minutes 50% of total GCSE 80 marks

Practical Programming

All students will undertake a programming task either to a specification or to solve a problem.

Aspects of programming will be tested in both components

Course Structure



J277/01: Computer systems:

- 1.1 Systems architecture
- 1.2 Memory and storage
- 1.3 Computer networks
- 1.4 Network security
- 1.5 Systems software
- 1.6 Ethical, legal, cultural and environmental impacts technology

J277/02: Computational thinking, algorithms and programming

- 2.1 Algorithms
- 2.2 Programming fundamentals
- 2.3 Producing robust programs
- 2.4 Boolean logic
- 2.5 Programming languages and Integrated Development Environments

Is Computer Science for me?

Are you...

- Determined and resilient?
- Can apply skills to new tasks?
- A Logical thinker?
- Have an eye for detail?
- Enjoy problem solving and Maths?
- Interested in how computers work?
- Interested in writing programs using Python?



Why should I take Computer Science?

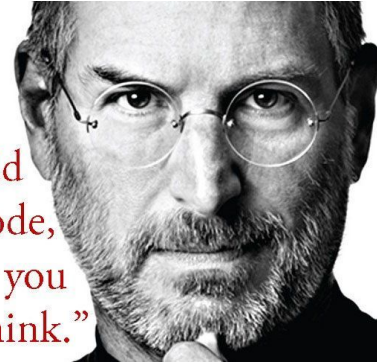
CS is based around logical thinking and problem solving.

CS is fast paced and ever changing

Become a developer not just an end user

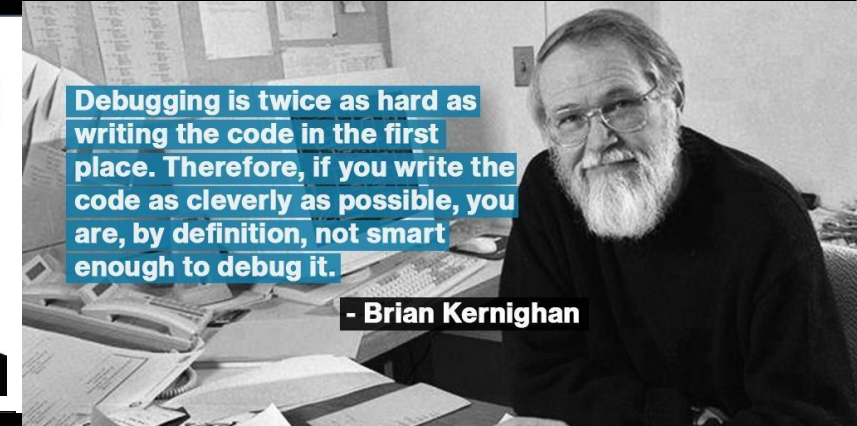
Steve Jobs

“Everyone should learn how to code, it teaches you how to think.”



Debugging is twice as hard as writing the code in the first place. Therefore, if you write the code as cleverly as possible, you are, by definition, not smart enough to debug it.

- Brian Kernighan



Computer science is the operating system for all innovation.

— Steve Ballmer —

AZ QUOTES



Some people dream of success...while others wake up and work hard at it.

Mark Zuckerberg



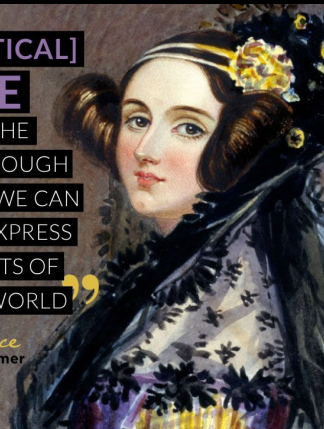
The computer was born to solve problems that did not exist before.

Bill Gates



[MATHEMATICAL] SCIENCE CONSTITUTES THE LANGUAGE THROUGH WHICH ALONE WE CAN ADEQUATELY EXPRESS THE GREAT FACTS OF THE NATURAL WORLD.”

Ada Lovelace
1st computer programmer
1815 - 1852



Sixth Form

A Level Computer Science

- Want to apply your coding ability to solve real-world problems?
- Are looking at a computing orientated degree
- Are aiming to work in the computing industry?

Careers in Computing

- App developer
- Computer games developer
- Cyber intelligence officer
- Forensic computer analyst
- IT project manager
- Network manager
- Robotics engineer
- Web developer
- Artificial Intelligence



Any questions

You will have an opportunity to ask any questions you might have tomorrow night during the year 9 parents' evening.

**Otherwise you can contact me via email
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