

The Computer Science curriculum

Computer Science curriculum vision

Computer Science prepares our students for the most important technology of our age. We're ambitious in driving our students to understand the technology they use every day. By the end of their time with us students should have the ability to explain how computers work, and use them to create important artefacts.

Computer Science is still relatively new at Barr's Hill, so some units overlap at KS3. As our students become more experienced these will develop into new topics.

Key stage 3 – Units of study

Term	Year 7	Year 8	Year 9
Rotation 1	Binary and data representation Using computers	Computer Hardware and Booleans Introduction to HTML	Computer Hardware and Booleans Introduction to HTML Introduction to programming with Python
Rotation 2	E-mail and algorithms Introduction to programming with Python	Presenting Data Introduction to programming with Python	

Key stage 4 – Units of study OCR GCSE J277

Term	Year 10	Year 11
1	1.1 Systems architecture 1.2 Memory and storage	2.2 Programming fundamentals
2	2.1 Algorithms 2.2 Programming fundamentals	2.1 Algorithms 2.3 Producing robust programs
3	1.3 Networks	2.2 Programming fundamentals 2.4 Boolean logic 2.5 Programming languages and IDEs
4	1.4 Network security 2.2 Programming fundamentals	2.2 Programming fundamentals 1.2 Data representation
5	1.5 Systems software 1.6 Ethics	Review and exam preparation
6	2.3 Producing robust programs NEA task	

Key stage 5 – Units of study OCR A level H446

Term	Year 12	Year 13
1	1.1 Systems architecture 2.2 Problem solving and programming	
2	1.2 Software and software development 2.2 Problem solving and programming	
3	1.3 Exchanging data 2.2 Problem solving and programming	
4	1.3 Exchanging data 2.2 Problem solving and programming	
5	1.4 Data types, data structures and algorithms 2.2 Problem solving and programming	
6	1.1 – 1.4 review 2.2 Problem solving and programming	