



## Computer Science Curriculum Information - A Level

As students embark on their Computer Science GCE, we thought it would be useful to share an overview of the course.

### **In Key Stage 5 Computer Science:**

The examination board for A Level Computer Science is AQA. You can find further information relating to the specification here: [AQA Computer Science A-Level 7517](#)

- Paper 1 40%: Completed on a computer in exam conditions. This exam focuses upon programming and fundamentals of programming. It also includes the fundamentals of data structures, fundamentals of algorithms and the theory of computation
- Paper 2 40%: This covers the fundamentals of data representation, fundamentals of computer systems, fundamentals of computer organisation and architecture, consequences of uses of computing, fundamentals of communication and networking, fundamentals of databases, Big Data, fundamentals of functional programming, and systematic approaches to problem solving
- Non Exam Element 20%: This is a project of the student's choosing that will be completed both at home and in class.

### **Required resources:**

- A calculator
- A4 ring binder
- Hole punch compatible with ring binder

### **Optional resource - Laptop:**

It is not necessary for students to bring a laptop, we have two dedicated Computer Science rooms which include PCs with all the required software. However if they are purchasing a laptop, it is worth making sure that it will run Microsoft Visual studio, and preferable if it can also run Microsoft SQL and Microsoft SSMS. This can be any laptop running Windows 10 or 11, or an Apple Mac and a copy of Windows 10 or 11 installed as a dual boot ([Boot Camp](#)).

### **Useful websites**

- [PhysicsAndMathsTutor AQA A Level Computer Science](#)
- [Videos by Craig & Dave covering the AQA theory](#)
- [W3Schools tutorial on learning C#](#)
- <https://www.codecademy.com/learn/learn-c-sharp>
- [W3Schools tutorial on SQL](#)
- [dotnetfiddle.net - online C# compiler](#)
- <https://dotnet.microsoft.com/en-us/learn/csharp>

### **Career Links**

- <https://www.smallpeicetrust.org.uk/cyberfirst-advanced>

### **Homework and assessment:**

Homework of 4 hours will be set in Computer Science to give the students time to consolidate their understanding of work covered at school and further develop their ideas. Homework may take the form of a written or practical piece and is marked in class where feedback is given in line with the school marking policy and exam board assessment criteria. Assessment marks are subject to change and are based on the last exam season grade boundaries.

**Revision:**

Revision takes the form of completing past paper questions grouped by topic. These are made available via Google Classroom. Programming questions are made available from both past papers and created to be compatible with the AQA specification specific content and marking guidance.

**Co-curricular Computer Science:**

- Visiting the National Museum of Computing at Bletchley
- AI Club - learn [Google Tensorflow](#)

If you have any queries, please contact Mr James Petty, Head of Computer Science, at [jpetty@ahs.bucks.sch.uk](mailto:jpetty@ahs.bucks.sch.uk)