GCSE COMPUTING

Why study this course?
The GCSE Computing course will give students a real in depth understanding of how computer technology works. It offers an insight into what goes on behind the scenes of computer programming which many students find absorbing.

In addition this course develops a range of critical thinking skills, analysis and problem solving which can be transferred to further learning and to everyday life.

You will study 2 units over the two years; both are examined at the end of Year 11.

Unit 1: Computer Systems
(Assessed with a 90 minute examination worth 50% of the course)
This unit introduces students to the central processing unit (CPU), computer memory and storage, wired and wireless networks, network topologies, system security and system software. It also looks at ethical, legal, cultural and environmental concerns associated with computer science.

Unit 2: Computational thinking, algorithms and programming.
(Assessed with a 90 minute examination worth 50% of the course)
Students apply knowledge and understanding gained in Unit 1. They develop skills and understanding in computational thinking: algorithms, programming techniques, producing robust programs, computational logic, translators and data representation. The skills and knowledge developed within this component will support the learner when completing the Programming Project.

Programming Project (20 hours of lesson time)
Students use OCR Programming Project tasks to develop their practical ability in the skills developed in units 1 and 2. Students have the opportunity to define success criteria from a given problem then create suitable algorithms to achieve the success criteria. Students code their solutions in a suitable programming language, and check its functionality using a suitable and documented test plan. Finally they will evaluate the success of their solution and reflect on potential developments for the future. The Programming Project does not count towards a candidate's final grade, but is a requirement of the course

What do I need to be able to join the course?
The course is open to students who we expect to achieve a minimum of a grade 6 in GCSE Maths. This is due to the technical requirements of computer programming.

What styles of teaching and learning will be used?
- A variety of teaching styles will be used to enable you to complete the units.
- You will be expected to work independently and as part of a team at times.
- You will research and learn about computing through possible visits, group work, outside speakers and internet research.

Pathways
Students who study Computing can go on to study ICT in the sixth form at Astley. Many have then gone on to successfully gain ICT places at university before embarking on their own careers.

For further information please contact your ICT teacher or Mr Armstrong