



Curriculum Aim – COMPUTING



The aim of the computing department is to help students become competent & confident users of technology, to help them develop an interest in computing, and to demonstrate to them the potential of computer systems, and their impact on the modern world.

KS 3 Intent

- To build up a core of digital literacy, to help prepare pupils for the modern workplace.
- To develop logical reasoning, problem solving & critical thinking skills.
- To give a wide range of experiences in digital technology.
- To help futureproof pupils against new and upcoming technologies.
- To develop teamwork & collaboration skills when solving problems.
- To improve basic numeracy & literacy.
- To prepare pupils for the key stage 4 courses.

KS 4 Intent

OCR GCSE Computer Science:

- To understand and apply the fundamental principles and concepts of Computer Science, including abstraction, decomposition, logical thinking, algorithms, and data representation.
- To analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs.
- To think creatively, innovatively, analytically, logically and critically.
- Understand the components that make up digital systems, and how they communicate with one another and with other systems.
- To understand the impacts of digital technology on the individual and wider society.
- To apply mathematical skills relevant to Computer Science.

Cambridge Nationals in Information Technologies:

- To learn about tools and techniques for use in different digital hardware and software technologies, and how these can be integrated to create digital solutions to manage and communicate data and information.
- To understand the legal, ethical and moral considerations when using technology to gather, store and present data and information, and how to mitigate the risks of cyber-attacks.
- How to select and use the most appropriate technology safely and effectively.
- To learn to follow a project life cycle of initiation, planning, execution and evaluation to complete a data management task.

KS 5 Intent (OCRA-Level Computer Science)

- To gain an understanding and ability to apply the fundamental principles and concepts of computer science, including; abstraction, decomposition, logic, algorithms and data representation.

	<ul style="list-style-type: none"> • To gain the ability to analyse problems in computational terms through practical experience of solving such problems, including writing programs to do so. • To develop the capacity to think creatively, innovatively, analytically, logically and critically. • To develop the capacity to see relationships between different aspects of computer science. • To develop mathematical skills, as related to computer science. • To develop the ability to articulate the individual (moral), social (ethical), legal and cultural opportunities and risks of digital technology.
<p><u>Curriculum Implementation</u></p>	<ul style="list-style-type: none"> • Consistent lesson provision, across the department, resourced with good quality, differentiated materials • Opportunities to use skills outside of the classroom, through extracurricular clubs and competitions. • Clear presentation of the department and its offerings at both year 9 options evening & year 6/11 open evenings.
<p><u>Curriculum Impact</u></p>	<p><u>Assessed through:</u></p> <ul style="list-style-type: none"> • Student outcomes – both summative & formative, centrally tracked and analysed. • Learning walks, observations & work scrutiny. • KS 4/5 uptake. • Improving gender balance. <p>Strong Impact if:</p> <ul style="list-style-type: none"> • Pupils develop an interest in computing, and see a use for it in their daily lives. • Pupils see computing lessons as an academic pursuit, which is challenging, but where they can achieve. • Pupils achieve their potential at KS4/5. • Pupils behave appropriately in lessons, and have a good attitude to learning. • Students take pride in their work, completing it to a high standard.