

Curriculum Intent – Computer Science

Our intent is to promote computational thinking and digital creativity. We want our students to develop the foundations to enable them to be discerning, life-long learners in a fast-moving landscape. Our curriculum is designed to allow students to provide a balanced and informed curriculum across all key stages giving students access to Computing, ICT and Digital Literacy.

We aim for our students to develop the following skills:

- understand and apply the fundamental principles and concepts of Computer Science, including abstraction, decomposition, logic, algorithms, and data representation
- analyse problems in computational terms through practical experience of solving such problems, including designing, writing, and debugging programs
- think creatively, innovatively, analytically, logically, and critically
- understand the components that make up digital systems, and how they communicate with other systems
- develop a deep understanding of computational thinking and how to apply it through a chosen programming language
- develop valuable thinking and programming skills that are extremely attractive in the modern workplace
- understand the impacts of digital technology to the individual and to wider society
- develop, in context, desirable, transferable skills such as research, planning, and review, working with others and communicating creative concepts
- provide learners with essential knowledge and tools to improve their learning in other subjects with the aims of enhancing their employability when they leave education, contributing to their personal development and future economic well-being

Pedagogy	Enrichment	Other general principals
<p>Our pedagogy is underpinned by:</p> <ul style="list-style-type: none"> the regular use of live modelling to demonstrate processes, standards and expectations of work a range of strategies to deepen knowledge so that it is committed to long term memory such as Recall a need to 'normalise error' so that teachers can pre-empt error as part of their planning to address gaps swiftly, and students see error as a learning opportunity. 	<p>We will enrich our curriculum by:</p> <ul style="list-style-type: none"> establishing cross-curricular links providing regular on and off-site subject or topic related experiences taking part in national competitions encouraging students to contribute to the life of the school and the community, including charity work, and use these 'real' contexts to develop their skills and knowledge in Computer Science developing partnerships with external providers that extend student's opportunities for learning 	<p>Our curriculum will enable students to:</p> <ul style="list-style-type: none"> have access to both Computer Science and Information Technology and make informed choices on how they pursue the subjects as they continue their learning journey through the academy be able to use, express themselves and develop their ideas through, information and communication technology - at a level suitable for the future workplace be active, aware, and informed participants in the digital world leave their education here with the skill set to keep their knowledge up to date in the ever-changing digital technology landscape.