Because we are "*we all come together to learn*",
there is a strong universal element to our curriculum:
we give <u>all</u> learners, particularly the most disadvantaged,
the knowledge and cultural capital they need to success in life.

COMPUTING

<u>Intent</u>

Our aim in Computing aim is two-fold: to inspire students – as pioneers of the future; and to nurture a love of our subject. As computer programs pervade every aspect of our lives, our society needs computer scientists – passionate individuals to develop computing in every type of industry.

In practice, this means that students need to see the wider picture and to relate their learning to the real world and possible career paths. They need to become digitally literate, and digitally resilient. We will achieve this by teaching them to understand and apply the fundamental principles and concepts of Computer Science. They will acquire this knowledge by learning key facts and words, by analysing problems in computational terms, and through repeated practical experience of writing computer programs in order to solve problems. Students will thus learn to evaluate and apply information technology (including unfamiliar technologies) and will become competent and creative users of it – in both home and work contexts.

<u>Implementation</u>

At **Key Stage 3** students will be introduced to how computers work, programming, HTML, computational thinking, spreadsheets, sound editing, networks, databases, video editing, cyber security, implications of digital systems and legal, ethical and environmental issues.

At **Key Stages 4 and 5** Computer Science students will:

- understand more deeply fundamental Computer Science concepts, *eg* abstraction, decomposition, logic, algorithms, and data representation;
- analyse problems in computational terms by practically solving such problems, including designing, writing and debugging programs;
- learn to think creatively, innovatively, analytically, logically and critically understand the components that make up digital systems; and will
- understand the impacts of digital technology to the individual and to wider society and apply mathematical skills relevant to computer science.

To ensure long-term retention of knowledge we revisit prior learning by implementing a spiral curriculum, thus ensuring we constantly build upon previous knowledge. We use responsive teaching, questioning, knowledge-based assessments, deliberate and guided practice to check student understanding. Resources are selected to support, assess, develop and consolidate knowledge and skills to facilitate progression. To inspire a passion through activities out of the classroom we aim to use competitions, outside speakers and extra-curricular clubs. We promote reading around computing through class discussion and in particular whilst teaching emerging technologies and the history of computing.

<u>Impact</u>

Students will show progress in tracking, formal/informal assessments of facts/keywords, and end-of-unit tests. Assessed real-life practical tasks' outcomes will be used responsively to ensure progress. Their progress, and our reviews, will determine how well we have achieved our intent.

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