Computing Year 9	**Curriculum intent:** The year 9 curriculum builds on the achievements of year 8 and consolidates that understanding through the use of interleaving the key concepts listed below and tasks to scaffold the students' learning experiences. As in year 7 and 8, new concepts and techniques are acquired through a combination of teacher led tasks, class discussions and practical activities. These are designed to increase the student understanding of the concepts, allowing them to apply their new found understanding in a variety of different scenarios related to the concepts being taught in an engaging way. This approach not only allows for co-ordinated efforts of students to be encouraged but also makes use of numerous open ended tasks that allow all students to stretch their understanding of these concepts as far as they are able.

Topic	Data Modelling and Visualisation	Memory and Storage	Ethics in Technology	Databases	Online application development	Digital Entrepreneurialism
Interleaving	Key knowledge from previously studied topics	Key knowledge from previously studied topics	Key knowledge from previously studied topics	Key knowledge from previously studied topics	Key knowledge from previously studied topics	Key knowledge from previously studied topic throughout KS3.
Knowledge	Students will learn about how data can be represented effectively and how real-world situations can be modelled allowing for interpretation of 'what-if' scenarios.	Students will study and extend their learning of how information is stored, storage components and be able to evaluate suitability for a range of given scenarios (including data-sizing calculations).	Students will examine a range of ethical scenarios and how these impact individuals, wider society and technological progress in general.	Students will learn about storing data and how relational databases provide an efficient way of doing so. Students will gain an appreciation of different forms of data and how data schemas should be designed to make data quicker and easier to access, collate and process.	Students will combine coding, databases and web presentation skills to create a simple web-based interactive application.	Students will learn about how digital systems are integrated in the real world and the opportunities this provides in a range of different industries.
Understanding	Students will model a range of scenarios and test against these to find the impact of changes and refine variables. Students will produce visual outputs based on this data and explain and interpret the results they derive whilst investigating the probable reasons for these results.	Students will investigate different storage devices and assess their suitability for given tasks. Students will also investigate the history of storage and memory and present how this impacts the 'power' of computing systems (including future developments).	Students will examine a range of scenarios and explore these in terms of ethical, moral and legal standpoints. Students will explain why certain technical outcomes or provisions will be advantageous to some and not others and how technology can detriment as well as improve the lives of those who do (or do not) use it.	Students will create simple databases with appropriate relationships and query these databases for results. Students will select the correct data types and constraints and use multiple tables within a database and then query these using structured query language.	Students will generate an interactive application using web-based technologies to fit a given set of requirements. Students will create success criteria and write a solution that allows retrieval and display of information via a web interface.	Students will work through a series of online, varied tasks to improve their understanding of how technology is used in business and industry whilst highlighting the impact of technology on careers they may be interested in pursuing.
Skills	Computational Thinking Computational Thinking Computational Thinking Computational Thinking	Computational Thinking Computational Thinking Computational Thinking Computational Thinking	Computational Thinking Problem Solving Analysis, Evaluation and Implementation Technical Vocabulary	Computational Thinking Problem Solving Analysis, Evaluation and Implementation Technical Vocabulary	Computational Thinking Problem Solving Analysis, Evaluation and Implementation Technical Vocabulary	Computational Thinking Problem Solving Analysis, Evaluation and Implementation Technical Vocabulary
Assessment	End of Unit mini-project based on a previously unseen set of data.	Students will be assessed throughout the unit on a range of tasks with a final written assessment at the end of the unit.	In assessment, students will respond to a range of questions and justify why they have chosen the response that they have.	Students will produce documentation of their database structure in a report and answer questions related to a given dataset for query.	Final application will be submitted alongside a report detailing the steps taken throughout the development journey.	Final assessment based on the collation and completion of all individual tasks encountered in this topic. Nationally recognised certificate awarded.