

## Year 9 COMPUTING

### Overall Intent:

In Year 9, students cement their understanding of computer principles and concepts. The term begins with programming and learning the main functions and application of a new text-based language. Focus is placed on the coding skills and terminology that will be encountered at GCSE, building a foundation for further study. Students revisit spreadsheets and learn more complex formulas and functions, that can be used in further study or employment. In the final term students study the staple number systems that are used in computing. They will apply these to a simulation of a computer and demonstrate their understand. This also provides the opportunity to place abstract concepts into a tangible environment

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Topic/Area of study</b>	COMPRESSION CODING		SPREADSHEETS BUILDING A COMPUTER		BINARY BINARY ADDITION HEXADECIMAL CPU SIMULATOR	
<b>Key learning aims – knowledge and skills</b>	Students will know what compression types exist and the benefits of each. They will learn core coding principles such as variables, constants, selection and sequence. They will also learn how to test and recognise errors and correct them.		Students will research the various components of a computer in order to build a model of a computer.		Students will understand the main number systems of a computer and be able to convert between them. They will demonstrate how to program a CPU with a CPU simulator. They will know the various parts of the CPU and be able to explain how they interact.	
<b>Assessment</b>		Program Code Assessment				End of Year Assessment