

COMPUTER SCIENCE – CURRICULUM INTENT

ASPIRE – CHALLENGE – ACHIEVE

Computer Science is the study of processes that interact with data and that can be represented as data in the form of programs. It enables the use of algorithms to manipulate, store and communicate digital information. Information technology is the use of computers to store, retrieve, transmit and manipulate data or information.

The department strives to develop a passion in students for technology and information systems. Students are supported through an aspirational flight path, with appropriate curriculum intervention opportunities built in, allowing them to achieve highly in Computer Science regardless of their level of ability.

Students have many opportunities to develop digital literacy whilst having the opportunity to learn concepts and principles from Computer Science and Information Technology. It provides opportunities to focus on the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. Students are encouraged to become independent learners to be able to analyse problems in computational terms, and have repeated practical experience of writing computer programs to solve such problems. Students are also encouraged to be articulate using appropriate subject vocabulary in a range of contexts.

Technology advances constantly and people are always working on new and inventive ways to use it. By studying Computer Science, our students will be able to evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems. They will also become responsible, competent, confident and creative users of information and communication technology. We aim to foster curiosity and thinking skills in all our learners, preparing them to learn how to look at a problem and working out a way a computer might be able to help you solve it. We aim to prepare our students to become logical thinkers and problem solvers. To support this weekly extra-curricular support is offered to all students irrespective of their ability but aspiring to be successful in Computer Science.

COMPUTER SCIENCE – CURRICULUM MAP

Key = Matching colours denote links between topics either in content or skills across Key Stages

7	COMPUTER CRIME	SCRATCH	PYTHON	GOOGLE SKETCHUP	COMPUTER SYSTEMS WITH FLOWOL	GRAPHICS
8	UNDERSTANDING COMPUTERS	SCRATCH	PYTHON	COMPUTER ANIMATION	SPREADSHEET MODELLING	WEB DESIGN
9	HTML	VIDEO	SOUND	NETWORKS	DATABASES	USER INTERFACES
10	THE USER INTERFACE	PROJECT PLANNING TECHNIQUES		CREATING A USER INTERFACE		COLLECTING, PRESENTING AND INTERPRETING DATA
11	EFFECTIVE DIGITAL WORKING PRACTICES	REVISION		BTEC EXAM		COLLECTING, PRESENTING AND INTERPRETING DATA
12	SOCIAL MEDIA IN BUSINESS	RELATIONAL DATABASES			REVISION	AS EXAMS
13	INFORMATION TECHNOLOGY SYSTEMS		REVISION	A2 EXAMS	WEB DESIGN	