



Computing: Year 9

Scheme of Learning	Assessments
<p>Half Term One: Safe Working Practice (Data Risk, Laws and Ethics)</p> <p>The Overarching Inquiry: How is the use of technology affecting people around the world?</p> <p>This unit will look at risks to our personal information, the laws and legislations that govern the use of technology and the ethical issues surrounding the use of computers.</p> <p>Key concepts:</p> <p>CS AO5: Understand the impacts of digital technology to the individual and to wider society.</p> <p>Note: One lesson per fortnight will be spent on programming techniques, designed at preparation for programming projects and the course non-examinable assessment.</p>	<p>Assessment One:</p> <p>Create a presentation that discusses the ethical impact of technology in a real world situation (AO5)</p> <p>Assessment Two:</p> <p>End of Unit Quizizz test covering risks to personal data and computer laws and ethics (AO5)</p>
<p>Half Term Two: What is a computer?</p> <p>The Overarching Inquiry: How and why do computer devices communicate?</p> <p>This unit will look at examples of computer systems, embedded systems and binary addition. It will also look at the use of networks and network topologies.</p> <p>Key concepts:</p> <p>CS AO1: Understand and apply the fundamental principles and concepts of</p>	<p>Assessment One:</p> <p>Produce a presentation that explains different types of computer system and embedded system. (AO1, AO4)</p> <p>Assessment Two:</p> <p>End of Unit Quizizz test covering embedded systems, networks (AO4) and Binary addition (AO1, AO6)</p>

Computer Science, including abstraction, decomposition, logic, algorithms and data representation.

CS AO4: Understand the components that make up digital systems, and how they communicate with one another and with other systems.

CS AO6: Apply Mathematical skills relevant to Computer Science.

Note: One lesson per fortnight will be spent on programming techniques, designed at preparation for programming projects and the course non-examinable

Half Term Three: Programming (Python)

The Overarching Inquiry: How are computer programs used to control the world around us?

In this unit we will be working in Python to complete a small project that includes a variety of programming techniques. We will also look at the Systems Development Lifecycle and prototyping.

Key concepts:

CS AO1: Understand and apply the fundamental principles and concepts of Computer Science, including abstraction, decomposition, logic, algorithms and data representation.

CS AO2: Analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs.

CS AO3: Think creatively, innovatively, analytically, logically and critically.

CS AO6: Apply Mathematical skills relevant to Computer Science.

<p>Half Term Three: Programming (Python)</p> <p>The Overarching Inquiry: How are computer programs used to control the world around us?</p> <p>In this unit we will be working in Python to complete a small project that includes a variety of programming techniques. We will also look at the Systems Development Lifecycle and prototyping.</p> <p>Key concepts:</p> <p>CS AO1: Understand and apply the fundamental principles and concepts of Computer Science, including abstraction, decomposition, logic, algorithms and data representation.</p> <p>CS AO2: Analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs.</p> <p>CS AO3: Think creatively, innovatively, analytically, logically and critically.</p> <p>CS AO6: Apply Mathematical skills relevant to Computer Science.</p>	<p>Assessment One:</p> <p>Quizizz test covering programming terminology and techniques and development lifecycle (AO1, AO3)</p> <p>Assessment Two:</p> <p>Create annotated screenshot evidence of a program created in Python, using data types, sequencing and techniques such as variables, iteration, selection, loops (iteration) and Boolean logic, accompanied by testing and evaluation of the program (AO2, AO3, AO6)</p>
<p>Half Term Four: System Security</p> <p>The Overarching Inquiry: Why are the world's leading powers so worried about cyber security?</p> <p>This unit will look at computer vulnerabilities, types of cyber-attacks and methods used to secure computer systems.</p> <p>Key concepts:</p> <p>CS AO4: Understand the components that make up digital systems, and how they communicate with one another and with other systems.</p> <p>CS AO5: Understand the impacts of digital</p>	<p>Assessment one:</p> <p>Create a news article that explains how cyber security is affecting the way businesses and governments work (AO5)</p> <p>Assessment Two:</p> <p>End of Unit Quizizz test covering types of cyber security attacks and methods of reducing/avoiding these issues (AO4, AO5)</p>

<p>technology to the individual and to wider society.</p> <p>Note: One lesson per fortnight will be spent on programming techniques, designed at preparation for programming projects and the course non-examinable assessment.</p>	
<p>Half Term Five: Software</p> <p>The Overarching Inquiry: How do we interact with computers?</p> <p>This unit will look at different types of software a computer uses and what it is used for. This includes applications, operating systems and utility software.</p> <p>Key concepts:</p> <p>CS AO4: Understand the components that make up digital systems, and how they communicate with one another and with other systems.</p> <p>Note: One lesson per fortnight will be spent on programming techniques, designed at preparation for programming projects and the course non-examinable assessment.</p>	<p>Assessment One:</p> <p>Quizizz test covering types of software and operating systems (AO4)</p> <p>Assessment Two :</p> <p>Create a quiz that will test other pupil's understanding of software types – you should show your knowledge through your question and answer selections (AO4)</p>
<p>Half Term Six: Technology in the Real World</p> <p>The Overarching Inquiry: Is technology improving or damaging our daily lives?</p> <p>This unit will look at how topical and current technology is being used to enhance people's lives, incorporating arguments for and against the use of technology and the cultural impact it has.</p> <p>Key concepts:</p> <p>CS AO4: Understand the components that make up digital systems, and how they communicate with one another and with other systems.</p>	<p>Assessment One:</p> <p>Create promotional material (poster, leaflet etc.) for a given piece of modern technology that identifies its advantages (AO4, AO5)</p> <p>Assessment Two:</p> <p>In a group, present to the class an argument for or against your given piece of technology (AO5)</p>

CS AO5: Understand the impacts of digital technology to the individual and to wider society.

Note: One lesson per fortnight will be spent on programming techniques, designed at preparation for programming projects and the course non-examinable assessment.