

## Curriculum Information Year 7

### Autumn Term

Unit title	Key Questions	Knowledge	Assessing Understanding
Impact Of Technology and Collaborating online respectfully	<p>How do I navigate the school's Google Workspace?</p> <p>How do I keep myself safe online?</p>	<p>The unit focuses on establishing safe and responsible digital practices including how to use the schools Google workspace environment, How to communicate and collaborate effectively and how to stay safe online.</p>	<p><b><i>How understanding is assessed</i></b></p> <p>Students work in pairs to create a presentation which they deliver to the class</p> <p>Students evaluate their presentations</p> <p><b><i>Skills</i></b></p> <p>Developing a presentation for a given audience</p> <p>Understanding copyright</p> <p>Presentation skills (Oracy/ Public speaking)</p> <p><b><i>Assessment Point Information</i></b></p> <p><b><i>Baseline test and Google Form topic test at the end of the unit data used to complete Progress check A</i></b></p>
Microbits	<p>Why learn to code using text based programming?</p>	<p><b>Programming</b> Create a range of programs using variables, sequencing and selection</p> <p><b>Problem solving</b> Applying logical thinking and</p>	<p><b><i>How understanding is assessed</i></b></p> <p>Assessment is primarily practical and observation-based, with a focus on demonstrating understanding through application and communication</p>

		<p>attention to detail to design and debug code.</p> <p><b>Practical application</b> Using the microbit and its accessories to create functional projects such as the Magic8 ball</p>	<p>Students submit evidence of their code</p> <p><b>Skills</b> Developing programming skills Problem solving Technical Oracy - Being able to articulate the functionality of their code by talking through their code in paired and whole class discussions</p> <p><b>Assessment Point Information</b></p> <p>Google Form topic test at the end of the unit</p>
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Spring Term

Unit title	Key Questions	Knowledge	Assessing Understanding
Computer Systems	What is a Computer system?	<p>To understand the core hardware components that make up a computer system</p> <p>To describe NOT, AND and OR logical operators and how they are used to build circuits and how this forms the foundation of hardware.</p> <p>To define artificial intelligence and machine learning, including exploring moral dilemmas associated with their use.</p>	<p><b>How understanding is assessed</b> Formative assessment of online worksheets Students are able to successfully demonstrate how machine learning works by teach a machine to know the difference between two objects</p> <p><b>Skills</b> Know what a computer system is  Know the difference between hardware and software  Describe the function of some of the hardware components within a computer system  Use logic gates to construct logic circuits</p>

			<p>Know a broad definition of 'artificial intelligence' and 'machine learning'</p> <p><b>Assessment Point Information</b></p> <p>Google Form topic test at the end of the unit</p>
Binary	<p>What is binary and how does it differ from our denary number system?</p> <p>How are text, images and sound represented by binary numbers in a computer system?</p>	<p>To understand that the binary number system is fundamental to computing</p> <p>To understand that all data is stored in binary</p>	<p><b>How understanding is assessed</b></p> <p>Progress is monitored in class and by the work students complete in class which is marked in Google Classroom</p> <p><b>Skills</b></p> <p>To be able to convert between binary and denary numbers</p> <p>To be able to complete addition in binary</p> <p>Converting messages from ASCII</p> <p>To edit sound files in Audacity</p> <p><b>Assessment Point Information</b></p> <p>Google Form topic test at the end of the unit</p>

#### Summer Term

Unit title	Key Questions	Knowledge	Assessing Understanding
Modelling Data - Spreadsheets	<p>What is the difference between data and information?</p> <p>What is the difference between primary and secondary data?</p>	<p>Foundational skills in organising, calculating and analysing data using spreadsheet software including:</p> <p>Knowing the parts of a spreadsheet</p> <p>Using basic mathematical formulas with cell references</p>	<p><b>How understanding is assessed</b></p> <p>Progress is monitored in class and by the work students complete in class which is marked in Google Classroom</p> <p><b>Skills</b></p> <p>Basic modelling skills using spreadsheets and basic formulas</p> <p>Working with real life problems</p> <p>How to present data using graphs and charts</p> <p>Using key functions SUM, MAX, MIN, AVERAGE, COUNTIF</p>

	How can I use modelling to analyse and present data?		and IF  <b>Assessment Point Information</b> Practical assessment of this unit where students are given an assessment scenario at the end of the unit and must apply all of the spreadsheet skills covered in this unit  <b>End of year test on all units also completed and used to inform Progress check B</b>
Python Turtle	How do I command the turtle to move, turn and draw specific shapes and patterns on screen?  How do I apply angle rules learned in Maths lessons?	Students further develop an understanding of fundamental programming concepts through a visual form	<b>How understanding is assessed</b>  <b>Skills</b> To be able to apply programming concepts such as sequencing, iteration and selection Develop skills in writing more efficient code using subroutines Learn to use variables to store and manipulate data within the programs for drawing shapes  <b>Assessment Point Information</b> Work assessed through evidence of work completed in Google classroom and in the unit paper booklet

Overflow lessons/cover - Safeskills (interactive online safety diagnostic tool)