



Year 9 Computer Science Curriculum Map						
Half Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Big Themes	How intelligent are computers? (2021) Students will learn about Computer systems including when and where they are used. They will look at Input/CPU/RAM/Output/Storage, Command Line Interface, Boolean Logic, Binary Addition, ASCII, Storing Sound in Binary and machine learning.		What is the Internet of Things? Students will explore physical computing, using the micro:bit. Students will write simple programs that use various micro:bit components to interact with the physical world. Students will select and design a project to apply what they have learnt by building a prototype.		How is IT used in business? Students will look at how the use of IT can be used in the workplace. This unit will give students important digital literacy skills including how to use Spreadsheets, create multimedia documents and use technology creatively to convey a message to an audience.	
Knowledge and skills covered	<ul style="list-style-type: none"> To describe what a general-purpose computer is To know that a program is a sequence of instructions To describe the function of hardware components used in computing systems To describe how the hardware components used in computing systems work 	<ul style="list-style-type: none"> To perform binary addition To know that text can be stored using a Character set such as ASCII To encode a word using ASCII To know how to sample a sound wave so it is able to be stored as binary Define artificial 	<ul style="list-style-type: none"> Understand what the micro:bit is List micro:bit's input and output devices Use a code editor to write, execute and debug Python programs for the micro:bit Write programs that use micro:bit's input and output devices 	<ul style="list-style-type: none"> Implement physical computing project based on project plan Identify everyday problems which could be solved by an IoT device Develop initial ideas to create a better understanding of the problem Define a minimum 	<ul style="list-style-type: none"> Identify columns, rows, cells, and cell references in spreadsheet software Use formatting techniques in a spreadsheet Use basic formulas with cell references to perform calculations in a spreadsheet (+, -, *, /) Use the autofill tool to 	<ul style="list-style-type: none"> Collect data Analyse data Create appropriate charts in a spreadsheet Use the functions SUM, COUNTA, MAX, and MIN in a spreadsheet Analyse data Use a spreadsheet to sort and filter data



	<ul style="list-style-type: none"> • together to execute programs • Explore how the processor, main memory, and storage interact • Understand the concept and functionality of an operating system • Use a command line command to interact with a computer system • To understand simple Boolean Logic 	<p>intelligence and machine learning</p> <ul style="list-style-type: none"> • Explore examples of where they are being applied • Teach a machine how to recognise different types of images • Discuss moral issues associated with these technologies 	<ul style="list-style-type: none"> • Write programs that use GPIO pins • Write programs that wirelessly communicate with other devices. • Design physical computing artefact based on a given use case and constraints. • Apply decomposition principles 	<p>viable product (MVP)</p> <ul style="list-style-type: none"> • Adjust IoT device designs to ensure technical feasibility • Create a MVP prototype • Understand testing in the development lifecycle • Summarise the key points of your IoT device in a presentation 	<p>replicate cell data</p> <ul style="list-style-type: none"> • Explain the difference between data and information • Explain the difference between primary and secondary sources of data 	<ul style="list-style-type: none"> • Use the functions AVERAGE, COUNTIF, and IF in a spreadsheet • Use conditional formatting in a spreadsheet • Apply all of the spreadsheet skills covered in this unit
<p>Knowledge organisers and more detailed topic resources can be found on all student Google Classrooms</p>						

Year 9 Key 'Subject' Assessment Dates 2021-22		
Data Drop 1	Data Drop 2	Data Drop 3
<p>Revision Focus: Unit 8.1</p> <p>Assessments: Online Assessment - Mixture of multiple choice questions and written responses.</p>	<p>Revision Focus: Unit 9.2</p> <p>Assessments: Online Assessment - Mixture of multiple choice questions and written responses.</p>	<p>Revision Focus: Unit 9.3</p> <p>Assessments: Online Assessment - Mixture of multiple choice questions and written responses.</p>