



	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Year 7	<p>Topic: Digital Skills and Security</p> <p>Resources: Computers, Google Classroom, Diagnostic Questions, Microsoft Office/Office 365,</p> <p>Focus: How do I set up a safe system of working on computers in school?</p> <p>Outcome: School systems set up securely, ready for use across the curriculum.</p> <p>Duration: 3 lessons</p>	<p>Topic: Digital Skills and Security</p> <p>Resources: Google Classroom, Internet</p> <p>Focus: Do I understand Data Law and Encryption?</p> <p>Outcome: Describe laws of computing and how data is encrypted. Demonstrate how to store files online safely.</p> <p>Duration: 3 lessons</p>	<p>Topic: E-Safety</p> <p>Resources: Google Classroom, Internet</p> <p>Focus: How can I stay safe online?</p> <p>Outcome: Use the Internet, apps and social media safely.</p> <p>Duration: 3 lessons</p>	<p>Topic: E-Safety</p> <p>Resources: Google Classroom, Internet</p> <p>Focus: Can I create a leaflet that shows my understanding of staying safe online?</p> <p>Outcome: A leaflet describing online risks and mitigations.</p> <p>Duration: 3 lessons</p>	<p>Topic: Programming in Scratch</p> <p>Resources: Scratch website, Google classroom, speakers/headphones</p> <p>Focus: What are the key programming constructs? How can I use these in a block based programming language?</p> <p>Outcome: I can construct a program using sequences, variables and selection.</p> <p>Duration: 3 lessons</p>	<p>Topic: Programming in Scratch</p> <p>Resources: Scratch website, Google classroom, speakers/headphones</p> <p>Focus: What are the key programming constructs? How can I use these in a block based programming language?</p> <p>Outcome: I can construct a program using operators and count-controlled iteration. I can write a program to solve a problem.</p> <p>Duration: 3 lessons</p>
Year 8	<p>Topic: Algorithms</p> <p>Resources: Google Classroom, Microsoft Office, Replit.com</p> <p>Focus: What are algorithms and flow charts? How do we design and develop them?</p> <p>Outcome: Create an algorithm and flow chart to solve a problem.</p> <p>Duration: 3 lessons</p>	<p>Topic: Programming</p> <p>Resources: repl.it, Google Classroom</p> <p>Focus: How do you develop a program in Python to complete a series of steps?</p> <p>Outcome: Develop a program in Python that solves a real-world problem.</p> <p>Duration: 3 lessons</p>	<p>Topic: Computer Hardware</p> <p>Resources: Computer components, Google Classroom</p> <p>Focus: What are the components of a computer system? Which factors influence the performance?</p> <p>Outcome: Create a quiz using Python on computer hardware, data storage and binary.</p>	<p>Topic: Computer Hardware</p> <p>Resources: Computer components, Google Classroom</p> <p>Focus: What are the components of a computer system? Which factors influence the performance?</p> <p>Outcome: Create a quiz using Python on computer hardware, data storage and binary.</p>	<p>Topic: Networks</p> <p>Resources: Internet access, Google Classroom</p> <p>Focus: How do networks operate? What are the different types? Why do we use a particular type of network?</p> <p>Outcome: I can describe types of network and identify network hardware.</p> <p>Duration: 3 lessons</p>	<p>Topic: Networks</p> <p>Resources: Internet access, Google Classroom</p> <p>Focus: What is the Internet? How does data travel across the Internet? What are the components that make up a web page?</p> <p>Outcome: I can define the Internet and describe key components of a web page.</p> <p>Duration: 3 lessons</p>



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Year 9	<p>Topic: Boolean and Binary</p> <p>Resources: Google Classroom, Microsoft Office</p> <p>Focus: How do computers store information? How can I convert between different number bases?</p> <p>Outcome: I can describe different types of memory and their purpose. I can convert between binary, denary and hexadecimal.</p> <p>Duration: 3 lessons</p>	<p>Topic: Boolean and Binary</p> <p>Resources: Google Classroom, Microsoft Office</p> <p>Focus: How do computers store different types of data? How can I write programs using Python?</p> <p>Outcome: I can describe how computers store characters, images, sound, and compressed data.</p> <p>Duration: 3 lessons</p>	<p>Topic: App development</p> <p>Resources: Google Classroom, App Lab</p> <p>Focus: How do you create an app? What is a GUI?</p> <p>Outcome: I can identify and fix common coding errors. I can describe and customise a GUI.</p> <p>Duration: 3 lessons</p>	<p>Topic: App development</p> <p>Resources: Google Classroom, App Lab</p> <p>Focus: How do you develop an app? How do you use block based programming to develop the components of an app? How do you design an app to a brief? How do you evaluate the effectiveness of a design?</p> <p>Outcome: I can code an app. I can evaluate the design process and the final product.</p> <p>Duration: 3 lessons</p>	<p>Topic: Website Design</p> <p>Resources: Google Classroom, Internet access</p> <p>Focus: What are the building blocks of a website? What is HTML? How does CSS improve web pages?</p> <p>Outcome: I can describe HTML and modify simple HTML tags. I can describe CSS and use it to style web pages.</p> <p>Duration: 3 lessons</p>	<p>Topic: Website Design</p> <p>Resources: Google Classroom, Internet access</p> <p>Focus: How do search engines work? How can we use advanced searching skills? How do we link individual web pages together into a navigable site?</p> <p>Outcome: I can produce a website of hyperlinked interactive webpages that describe my knowledge of website design.</p> <p>Duration: 3 lessons</p>



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Year 10	<p>Topic: Systems Architecture and Memory and Storage</p> <p>Resources: Website, Google Classroom, YouTube videos</p> <p>Focus: How do we explain different features of computer hardware? What are the different types of computer memory?</p> <p>Outcome: Student workbooks and end of topic tests demonstrate students can describe the different components that make up a computer CPU and explain the different types of memory and their advantages and disadvantages.</p> <p>Duration: 12 lessons</p>	<p>Topic: Memory and Storage</p> <p>Resources: Website, Google Classroom, YouTube videos</p> <p>Focus: How do computers store different types of information? What are number bases and how do we calculate and convert between them?</p> <p>Outcome: Student workbook and end of topic test demonstrate that students can describe the different types of data that computers store and how they encode and store the information.</p> <p>Duration: 12 lessons</p>	<p>Topic: Networks</p> <p>Resources: Websites, Google Classroom, YouTube videos</p> <p>Focus: Why are there different types of network? How do I choose the best one for a task? What hardware is used in networking? What are network protocols?</p> <p>Outcome: I can identify and describe different types of networks. I can explain the different items of network hardware. I can describe a network topology. I can explain network layers and protocols.</p> <p>Duration: 12 lessons</p>	<p>Topic: Network Security</p> <p>Resources: Websites, Google Classroom, YouTube videos</p> <p>Focus: What are the threats to networks? How can we defend against these threats?</p> <p>Outcome: I can identify and describe different network threats and methods to protect against them. I can explain different types of hackers.</p> <p>Duration: 12 lessons</p>	<p>Topic: Programming Fundamentals</p> <p>Resources: Google Classroom, repl.it, Python</p> <p>Focus: How does Python define different types of data? How can I output information from a program?</p> <p>Outcome: I can write simple programs that solve problems. I can identify and fix errors in my code.</p> <p>Duration: 9 lessons</p> <p>Topic: Algorithmic Thinking</p> <p>Resources: Google Classroom, repl.it, Python</p> <p>Focus: How do I think computationally? What steps do I need to take to solve a problem?</p> <p>Outcome: I can describe computational thinking.</p> <p>Duration: 5 lessons</p>	<p>Topic: Algorithmic Thinking</p> <p>Resources: Google Classroom, repl.it, Python</p> <p>Focus: What steps do I need to take to solve a problem? How can I lay out those steps logically?</p> <p>Outcome: I can write algorithms to solve problems. I can produce structure diagrams and interpret them in pseudocode, flowcharts and Python. I can identify searching and sorting algorithms.</p> <p>Duration: 13 lessons</p>



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Year 11	<p>Topic: Ethics and Legal Issues</p> <p>Resources: Google Classroom</p> <p>Focus: What are the ethical, environmental, cultural, legal and privacy issues in computing?</p> <p>Outcome: I can describe the issues in computing. I can identify the threats and measures to protect against them. I can discuss the ethical impacts of various digital technologies.</p> <p>Duration: 9 lessons</p> <p>Paper 1 revision lessons</p> <p>Duration: 3 lessons</p>	<p>Topic: Produce Robust programs</p> <p>Resources: Google Classroom, repl.it, Python</p> <p>Focus: What are defensive design considerations?</p> <p>How can data be authenticated or validated?</p> <p>What is the purpose of testing? How do we define appropriate test data?</p> <p>Outcome: I can describe methods to authenticate and validate data. I can suggest different types of test data. I can write maintainable code.</p> <p>Duration: 8 lessons</p> <p>Paper 2 Revision lessons</p> <p>Duration 3 lessons</p>	<p>Topic: Systems Software</p> <p>Resources: Google Classroom</p> <p>Focus: What is the purpose and functionality of an operating system? What is the purpose and functionality of utility software?</p> <p>Outcome: I can define and describe operating systems and their functions. I can identify types of utility software and their functions.</p> <p>Duration: 6 lessons</p> <p>Topic: Boolean logic</p> <p>Resources: Google Classroom, logic.ly website</p> <p>Focus: What are logic diagrams? How do you complete a truth table? How do logical operators and truth tables help to solve problems?</p> <p>Outcome: I can create logic diagrams using AND, OR and NOT gates. I can complete a truth table to solve a problem.</p> <p>Duration: 5 lessons</p>	<p>Topic: Designing and Testing Programs, Data Representation</p> <p>Resources: Google Classroom, repl.it, Python</p> <p>Focus: What are translators and IDEs and how can I use them? What are the characteristics of different levels of programming languages?</p> <p>Outcome: I can differentiate between levels of programming language and describe the hierarchy. I can identify common tools and facilities in an IDE.</p> <p>Duration: 6 lessons</p>	<p>Topic: Reflection, Revision and Exam Practice</p> <p>Resources: Google Classroom, past papers, Smart Revise, Knowledge organisers</p> <p>Focus: What are the key topics that I need to focus my revision on? How can I improve my understanding of these topics? How do I tackle the longer exam questions?</p> <p>Outcome: I can identify strengths and weaknesses in my knowledge. I can use strategies to fill in any gaps in my knowledge. I can identify key words and break questions down into appropriate sections for answering.</p> <p>Duration: 12 lessons</p>	