

SUBJECT: Computing & IT

SUBJECT

Yr 7	Autumn Term 1	Spring Term 1	Summer Term 1
1	<ul style="list-style-type: none"> To know and understand the rules the expectations of the computer room. <p>Careers – Digital etiquette Numeracy - Data PHSE Health and Well-being /relationships</p>	<ul style="list-style-type: none"> I understand the layout of a spreadsheet. <p>Numeracy -Geometry</p>	<ul style="list-style-type: none"> Define a subroutine as a group of instructions that will run when called by the main program or other subroutines. Define decomposition as breaking a problem down into smaller, more manageable subproblems.
2	<ul style="list-style-type: none"> To know what a digital footprint and digital shadow are. <p>Careers – Online reputations Numeracy - Data PHSE Relationships/ Living in the wider world</p>	<ul style="list-style-type: none"> To use basic formulas such as (+, -, *, /). To use the Auto fill tool. To apply cell references in my workbook. <p>Numeracy -integers & numbers</p>	<ul style="list-style-type: none"> Identify where condition-controlled iteration can be used in a program. Implement condition-controlled iteration in a program. <p>Numeracy -Sequences</p>
3	<ul style="list-style-type: none"> understand how bullying takes place online and what actions we may take to deal with it. <p>Careers -Online reputations Numeracy - Data PHSE Health and Well-being /relationships</p>	<ul style="list-style-type: none"> I know the difference between data and information. I know the difference between primary and secondary sources. 	<ul style="list-style-type: none"> Evaluate which type of iteration (count-controlled or condition-controlled) is required in a program. <p>Numeracy -Sequences</p>
4	<ul style="list-style-type: none"> To recognise signs of an online scam. <p>Careers – Numeracy - Data PHSE Living in the wider world / Health and Well being</p>	<ul style="list-style-type: none"> To analyse data using functions (sum, max, min, average, counta). To create a chart using populated data. <p>Numeracy -data, integers & numbers</p>	<ul style="list-style-type: none"> Define a list as a collection of related elements referred to by a single name. Use a list in a program.
5	<ul style="list-style-type: none"> To know the difference between online bullying and banter. <p>Careers -Online reputations Numeracy - Data PHSE Living in the wider world /relationships</p>	<ul style="list-style-type: none"> To use advanced functions such as countif, average and if. To sort and filter data. <p>Numeracy -data, integers & numbers</p>	<ul style="list-style-type: none"> Decompose a larger problem into smaller subproblems. Apply appropriate programming constructs (subroutines, loops, lists) to solve a problem.

SUBJECT: Computing & IT

6	<ul style="list-style-type: none"> Correctly identify the dangers of accessing, browsing and purchasing from the dark web. Describe the differences between the dark web and the visible web and how criminal activity is detected online. <p>Careers -Online reputations Numeracy - Data PHSE Living in the wider world / health and well being</p>	<ul style="list-style-type: none"> To apply conditional formatting to a populated worksheet. 	<ul style="list-style-type: none"> Apply programming knowledge to complete a translation quiz project.
	Autumn Term 2	Spring Term 2	Summer Term 2
7	<ul style="list-style-type: none"> Define what a computer network is and explain how data is transmitted between computers across networks. Define 'protocol' and provide examples of non-networking protocols. <p>Numeracy -Data PSHE – Living in the wider world</p>	<ul style="list-style-type: none"> Define a sequence as a set of instructions performed in order. Predict the outcome of a simple sequence. <p>Numeracy -Sequences</p>	<ul style="list-style-type: none"> Select the most appropriate software to use to complete a task. Identify the key features of a word processor. Apply the key features of a word processor to format a document.
8	<ul style="list-style-type: none"> List examples of the hardware necessary for connecting devices to networks. <p>PSHE – Living in the wider world</p>	<ul style="list-style-type: none"> Define a variable as a name that refers to data stored by the computer. Trace the values of variables within a sequence. Create a sequence that includes variables. <p>Numeracy -data, integers & numbers, algebra</p>	<ul style="list-style-type: none"> Select appropriate images for a given context. Apply appropriate formatting techniques. Demonstrate an understanding of licensing issues involving online content by applying appropriate Creative Commons licenses.
9	<ul style="list-style-type: none"> Compare wired to wireless connections and list examples of specific technologies currently used to implement such connections. 	<ul style="list-style-type: none"> Define a condition as an expression that evaluates to true or false. Identify that selection uses conditions to control the flow of a sequence. 	<ul style="list-style-type: none"> Critique digital content for credibility. Apply techniques to identify whether a source is credible.

SUBJECT: Computing & IT

	<ul style="list-style-type: none"> Define 'bandwidth' using appropriate units for measuring the rate at which data is transmitted and discuss examples where bandwidth is important. <p>Numeracy - Data PSHE – Living in the wider world</p>	<ul style="list-style-type: none"> Modify a program to include selection statements (If statements). <p>Numeracy -data, integers & numbers</p>	
10	<ul style="list-style-type: none"> Define what the internet is. Explain how data travels between computers across the internet. Describe key terms such as 'protocols,' 'packets,' and 'addressing.' <p>Numeracy -Sequences PSHE – Living in the wider world</p>	<ul style="list-style-type: none"> Create conditions that use comparison operators (>, <, =). Create conditions that use logical operators (and, or, not). Identify where selection statements can be used in a program with comparison and logical operators. <p>Numeracy -data, integers & numbers</p>	<ul style="list-style-type: none"> Apply referencing techniques and recognize the concept of plagiarism. Evaluate online sources for use in own work.
11	<ul style="list-style-type: none"> Explain the difference between the internet, its services, and the World Wide Web. Describe how services are provided over the internet and list some of these services. Explain the term 'connectivity' and how internet-connected devices (IoT) can affect individuals. <p>PSHE – Living in the wider world</p>	<ul style="list-style-type: none"> Define iteration as a group of instructions that are repeatedly executed. Describe the need for iteration. Implement count-controlled iteration in a program. Detect and correct errors in a program (debugging). <p>Numeracy -data, integers & numbers, sequences</p>	<ul style="list-style-type: none"> Construct a blog using appropriate software. Create content for a blog based on credible sources.
12	<ul style="list-style-type: none"> Describe the components associated with the World Wide Web and how they work together. Explain the difference between HTTP and HTTPS protocols. 	<ul style="list-style-type: none"> Independently design and apply programming constructs (subroutine, selection, count-controlled iteration, operators, and variables) to solve a problem. 	<ul style="list-style-type: none"> Apply referencing techniques that credit authors appropriately. Design the layout of the content to make it suitable for the audience.

SUBJECT: Computing & IT

	<ul style="list-style-type: none"> Understand URLs and their structures, the domain name system, and the relationship between IP addresses and domain names. <p>PSHE – Living in the wider world</p> <ul style="list-style-type: none"> 	<p>Numeracy -data, integers & numbers, sequences</p>	
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Yr 8	Autumn Term 1	Spring Term 1	Summer Term 1
1	<ul style="list-style-type: none"> Understand how computer malware is spread and how they harm your computer. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> 1.1 To identify the hardware and software components of a video game system. 1.2 To list some of the features of an existing computer game. 	<ul style="list-style-type: none"> Understand the concept of app development. To be Familiar with the coding environment, App Lab from code.org. <p>Numeracy -data, integers & numbers, sequences</p>
2	<ul style="list-style-type: none"> To list different types of Malwares and to provide real life examples of each. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> 2.1 To identify some components required to develop a computer game. 2.2 To contribute some ideas to the production of an implementation plan for a computer game development. 	<ul style="list-style-type: none"> Understand the importance of considering user needs in app design. Be able to decompose a project into smaller, manageable parts. <p>Numeracy -data, integers & numbers, sequences</p>
3	<ul style="list-style-type: none"> To respond to common problems regarding the use of passwords. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> Introduce the concept of game design principles and how to design game components. Provide an overview of the selected game project (Pacman or Tamagotchi). <p>Numeracy -data, integers & numbers, sequences</p>	<ul style="list-style-type: none"> Continue to understand the importance of user needs in the development process. Know how to implement an app based on the project plan. <p>Numeracy -data, integers & numbers, sequences</p>
4	<ul style="list-style-type: none"> To state three different ways of cracking passwords. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> 3.1 To assist in the design of a component of a computer game. Guide students to start designing a component of the selected game project. 	<ul style="list-style-type: none"> Understand the importance of user testing and feedback in app development. Be able to evaluate the success of the project against user needs.

Co-ordinator : Mr Taylor

SUBJECT: Computing & IT

	<u>Autumn Term 2</u>	<u>Spring Term 2</u>	<u>Summer Term 2</u>
5	<ul style="list-style-type: none"> To suggest different ways to avoid being affected by Malware. <p style="background-color: yellow;">PHSE Living in the wider world</p>	<p style="background-color: cyan;">Numeracy -data, integers & numbers, sequences</p> <ul style="list-style-type: none"> 3.2 To assist in the development of a component of a computer game. Provide guidance on the implementation of the designed game component. <p style="background-color: cyan;">Numeracy -data, integers & numbers, sequences</p>	<ul style="list-style-type: none"> Understanding of event-driven programming, including the use of event handlers. Awareness of how to use user input, variables, and sequencing in a block-based programming language.
6	<ul style="list-style-type: none"> To apply prior knowledge to create a presentation informing new year 7's about Malware, Online safety, password security and digital footprints. 	<ul style="list-style-type: none"> Test and refine the implemented game component. peer review and offer feedback for improvement. 	<ul style="list-style-type: none"> To use Sequencing and Selection and user input to complete a project. <p style="background-color: cyan;">Numeracy -data, integers & numbers, sequences</p>
7	<div style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> Understand that computing systems are unique because they can execute programs. Recognise the difference between general-purpose computing systems and purpose-built machinery. </div>	<ul style="list-style-type: none"> Identify and provide examples of different types of representations used in human history and daily life. Recognise the purpose of representations to store, communicate, and process information. Understand that different representations are suitable for various tasks and contexts. <p style="background-color: cyan;">Numeracy -Data</p>	<ul style="list-style-type: none"> A basic understanding of algorithms and programs. Recognise the difference between algorithms and programs. <p style="background-color: cyan;">Numeracy -data, integers & numbers, sequences</p>
8	<ul style="list-style-type: none"> Describe the main hardware components used in computing systems, including processors, memory, storage, input and output devices, and communication components. Understand how these hardware components work together to execute programs. 	<ul style="list-style-type: none"> Understand the concept of text representation using sequences of symbols. Distinguish between symbols and the physical media that carry these symbols. <p style="background-color: cyan;">Numeracy -Data</p>	<ul style="list-style-type: none"> Understand how to use assignment statements to perform calculations. Be able to receive numerical input from the keyboard and convert it into a numerical value. <p style="background-color: cyan;">Numeracy -data, integers & numbers, sequences</p>

SUBJECT: Computing & IT

9	<ul style="list-style-type: none"> Analyse how the hardware components of computing systems collaborate to execute programs. Define what an operating system is and its role in controlling program execution. 	<ul style="list-style-type: none"> Define binary digits (bits) by associating them with familiar symbols, such as letters and decimal digits. Measure the size or length of a sequence of bits by the number of binary digits it contains. 	<ul style="list-style-type: none"> Use relational operators to form logical expressions. Employ binary selection (if, else statements) to control the flow of program execution. Generate and use random integers.
		Numeracy -Data,	
10	<ul style="list-style-type: none"> Describe logical operators, such as NOT, AND, and OR, and understanding their use in forming logical expressions. Build logic circuits using logic gates and connecting them to logical operators and expressions. 	<ul style="list-style-type: none"> Describe how natural numbers are represented as sequences of binary digits. Convert between decimal numbers and their binary representations. 	<ul style="list-style-type: none"> Describe how iteration (while statements) controls the flow of program execution. Understand when and how to use selection in their programs.
		Numeracy -Data, numbers & integers	Numeracy -data, integers & numbers, sequences
11	<ul style="list-style-type: none"> Provide broad definitions of "artificial intelligence" and "machine learning." Identifying examples of artificial intelligence and machine learning in real-world applications. 	<ul style="list-style-type: none"> Be familiar with bytes and the use of size prefixes such as 'kilo-', 'mega-', 'giga-', and 'tera-' in measuring representation size. Convert between different units and multiples of representation size. Understand how binary digits are physically represented in digital devices. 	<ul style="list-style-type: none"> Use iteration (while loops) to control the flow of program execution. Utilize variables as counters in iterative programs. Apply counting techniques to solve problems.
	Numeracy -Algebra, sequences	Numeracy -Data	Numeracy -data, integers & numbers, sequences
12	<ul style="list-style-type: none"> Explain the implications of sharing program code. Reflect on common practices like "seeing inside" projects and "remixing." 	<ul style="list-style-type: none"> Apply prior learning to solve a problem related to binary representations. 	<ul style="list-style-type: none"> Combine iteration and selection to control the flow of program execution. Use Boolean variables as flags in their programs.
			Numeracy -data, integers & numbers, sequences

SUBJECT: Computing & IT

Yr 9	Autumn Term 1	Spring Term 1	Summer Term 1
1	<ul style="list-style-type: none"> Explain the difference between data and information. Critique online services in relation to data privacy. Identify what happens to data entered online. Explain the need for the Data Protection Act. <p>Numeracy -Data PHSE Living in the wider world</p>	<ul style="list-style-type: none"> Basic understanding of what Google SketchUp is and its applications. Familiarity with the user interface and how to access its tools. Knowledge of basic 3D modelling concepts, such as points, lines, shapes, and faces. <p>Numeracy -Shapes, geometry</p>	<ul style="list-style-type: none"> State various applications of interactive multimedia products. Understand the key elements in designing interactive multimedia products (colour schemes, house styles, layout, GUI, accessibility). State what hardware, software, and peripherals are needed to create and view interactive multimedia products. Awareness of limitations related to connections, bandwidth, and data transfer. Familiarity with file formats supported by different platforms.
2	<ul style="list-style-type: none"> Recognize how human errors pose security risks to data. Implement strategies to minimize the risk of data being compromised through human error. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> Ability to create and manipulate 3D shapes in SketchUp. Basic texturing and colouring of 3D models. <p>Numeracy -Shapes, geometry</p>	<ul style="list-style-type: none"> Interpretate a client requirement for interactive multimedia products based on specific briefs. Understand target audience requirements for interactive multimedia products. Create a work plan for an original interactive multimedia product, including tasks, workflow, resources, and timescales.
3	<ul style="list-style-type: none"> Define hacking in the context of cybersecurity. 	<ul style="list-style-type: none"> Knowledge of how to create complex objects by combining basic components. 	<ul style="list-style-type: none"> Plan the structure and features of an interactive multimedia product, including non-linear navigation and interaction.

SUBJECT: Computing & IT

	<ul style="list-style-type: none"> Explain how a DDoS attack can impact users of online services. Identify strategies to reduce the chance of a brute force attack being successful. Explain the need for the Computer Misuse Act. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> Understanding of transformations, including scaling, rotating, and moving. <p>Numeracy -Shapes, geometry</p>	<ul style="list-style-type: none"> Produce a visualisation diagram, mood board and mind map for a specific target brief. Identify what assets and resources are needed for creating an interactive multimedia product.
4	<ul style="list-style-type: none"> List the common malware threats. Examine how different types of malware cause problems for computer systems. Question how malicious bots can have an impact on societal issues. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> Proficiency in creating structures and designs with accurate dimensions. Creation of more complex architectural or design projects. <p>Numeracy -Shapes, geometry</p>	<ul style="list-style-type: none"> Source and select assets (graphics, sound, video, etc.) for use in an interactive multimedia product. Create and adapt assets as needed. Store assets for use in the interactive multimedia product.
5	<ul style="list-style-type: none"> Compare security threats against probability and the potential impact to organizations. Explain how networks can be protected from common security threats. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> Understanding the importance of textures and materials in 3D modelling. Knowledge of how to apply textures and materials to 3D surfaces. Proficiency in creating realistic surface appearances. Ability to apply textures and materials to architectural and design projects. 	<ul style="list-style-type: none"> Construct the structure of an interactive multimedia product. Setting up interaction and playback controls. Save and export the interactive multimedia product in suitable formats.
6	<ul style="list-style-type: none"> Identify the most effective methods to prevent cyberattacks. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> To independently design and model a complete 3D project. Present and showcase of the final 3D model. <p>Numeracy -Shapes, geometry</p>	<ul style="list-style-type: none"> Identify areas for improvement and further development of an interactive multimedia product.
	Autumn Term 2	Spring Term 2	Summer Term 2

SUBJECT: Computing & IT

7	<ul style="list-style-type: none"> Write and execute basic Python programs on the micro: bit. <p>Numeracy -Data, algebra, sequences, integers & numbers</p>	<ul style="list-style-type: none"> To know the contents, use and purpose of a Mood board and to review a mood board. 	<ul style="list-style-type: none"> To know how and why cryptography is used. To create a cipher code. <p>Numeracy -Data</p>
8	<ul style="list-style-type: none"> Write programs that use the micro: bit's LED display and built-in sensors. Recognise fundamental coding patterns in physical computing. <p>Numeracy -Data, algebra, sequences, integers & numbers</p>	<ul style="list-style-type: none"> To know the contents, use and purpose of a mindmap and to review a mind map. 	<ul style="list-style-type: none"> Understand the purpose and use of the Enigma machine during World War II. <p>Numeracy -Data</p>
9	<ul style="list-style-type: none"> Understand the use of the micro: bit's radio antenna for wireless communication. Develop project ideas and drafting project proposals. <p>Numeracy -Data, algebra, sequences, integers & numbers</p>	<ul style="list-style-type: none"> To know the contents, use and purpose of a visualisation diagram. and to review a visualisation diagram. 	<ul style="list-style-type: none"> Understand the concept of barcodes, including their purpose and common use in supermarkets and various industries. <p>Numeracy -Data</p>
10	<ul style="list-style-type: none"> Designing a physical computing project with a clear purpose. Decomposing the functionality of a physical computing system into simpler features. <p>Numeracy -Data, algebra, sequences, integers & numbers</p>	<ul style="list-style-type: none"> To know the contents, use and purpose of a storyboard and to review a storyboard. 	<ul style="list-style-type: none"> Explain the difference between public keys and private keys in the context of encryption and decryption. They should understand that public keys are used for encryption, while private keys are used for decryption. <p>Numeracy -Data</p>
11	<ul style="list-style-type: none"> Receive and provide peer feedback. 	<ul style="list-style-type: none"> To know the contents, use and purpose of a script and to review a script. 	<ul style="list-style-type: none"> understanding of what DRM is and why companies use it. They should know that DRM is a technology used to protect and

SUBJECT: Computing & IT

			control access to digital content such as music, movies, and software.
12	<ul style="list-style-type: none"> Reflect on the entire project development journey. 	<ul style="list-style-type: none"> To know the properties and limitations of different file formats for still images, audio, and moving images, including video and animation. 	<ul style="list-style-type: none"> To apply prior learning to a real-life situation

Yr 10	Autumn Term 1	Spring Term 1	Summer Term 1
1	<ul style="list-style-type: none"> Discuss the main safety concerns of being online. Define online reputation and discuss what it is made up of. Discuss techniques on how to build a positive online reputation. <p>Numeracy -Data PHSE Living in the wider world</p>	<ul style="list-style-type: none"> 1.1: Understanding the structure of numerical and other data needed in a spreadsheet. 1.2: Accurate data entry and editing. 1.3: Effective storage and retrieval of spreadsheet files following local guidelines and conventions. <p>Numeracy -Data, Integers & Numbers</p>	<ul style="list-style-type: none"> Describe the impact of cybercrime on businesses and individuals. Analyse an attack on a company and identify the hackers' motivations. Define the terms cybersecurity and network security, explain their importance, and distinguish between the two concepts. Describe the features of a network that make it vulnerable to attack.
2	<ul style="list-style-type: none"> Explain how data is collected online and how it is used. <p>Numeracy -Data PHSE Living in the wider world</p>	<ul style="list-style-type: none"> 1.4: Combining and linking data across multiple worksheets within a spreadsheet. <p>Numeracy -Data, Integers & Numbers</p>	<ul style="list-style-type: none"> Identify and describe non-automated forms of cyberattacks and how humans can be the weak links in an organization. Demonstrate knowledge of social engineering through role-playing activities and case studies.

SUBJECT: Computing & IT

3	<ul style="list-style-type: none"> Investigate the legal rights to privacy within the UK. Discuss which rights are believed to be upheld. Debate whether the right to privacy is important and if it's in tension with other rights. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> 2.1: Identifying how to summarize and display required information. 2.2: Using functions and formulas to meet calculation requirements. 2.3: Using spreadsheet tools and techniques for summarizing and displaying information. <p>Numeracy -Data, Integers & Numbers, Sequences & Functions</p>	<ul style="list-style-type: none"> Describe automated forms of cyberattacks. Analyse a real cyberattack and identify the network or software weaknesses that enabled it to happen.
4	<ul style="list-style-type: none"> Evaluate what data created online is valuable and to whom. Discuss ways in which data might be stolen. Define terms 'phishing' and 'malware.' Identify ways to protect one's data online. <p>Numeracy -Data PHSE Living in the wider world</p>	<ul style="list-style-type: none"> 3.1: Selecting and using tools and techniques to format spreadsheet cells, rows, and columns. 3.2: Identifying appropriate chart or graph types for displaying information. <p>Numeracy -Data</p>	<ul style="list-style-type: none"> Identify how software can be used to protect against cyberattacks. Describe how organizations use software to protect against cyberattacks.
5	<ul style="list-style-type: none"> Discuss examples of disinformation spread online. Define the term 'fake news' and discuss the quantity of fake news available online. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> 3.3: Selecting and using tools and techniques to generate, develop, and format charts and graphs. 3.4: Selecting and using appropriate page layout settings for presenting and printing spreadsheet information. <p>Numeracy -Data</p>	<ul style="list-style-type: none"> Explain the need for and the importance of network security. Explain various methods of achieving network security.
6	<ul style="list-style-type: none"> Reflect on how big data and other tools help target information to specific users. Discuss the impact of living in an online bubble. Contemplate the potential harms of being online. <p>Numeracy -Data</p>	<ul style="list-style-type: none"> 3.5: Checking spreadsheet information to ensure it meets needs, using IT tools and making corrections as appropriate. 3.6: Describing how to find errors in spreadsheet formulas. 3.7: Responding appropriately to any problems with spreadsheets. 	<ul style="list-style-type: none"> Describe different methods of identifying cybersecurity vulnerabilities (penetration testing, ethical hacking, network forensics, commercial analysis tools, review of network and user policies). Plan a penetration test for a social media company in a role-play scenario.

SUBJECT: Computing & IT

	PHSE Living in the wider world	Numeracy -Data	
	Autumn Term 2	Spring Term 2	Summer Term 2
7	<ul style="list-style-type: none"> Compare traditional and modern work practices. Understanding the advantages and disadvantages of 24/7/365 availability. <div style="background-color: #ffff00; padding: 2px;">PHSE Living in the wider world</div>	<ul style="list-style-type: none"> Define what a computer network is. Discuss the advantages and disadvantages of computer networks. Describe the role of a computer in a peer-to-peer network. Describe the role of a computer in a client-server network. Explain the purpose of PAN, LAN, and WAN. 	<ul style="list-style-type: none"> Describe the impact of cybercrime on businesses and individuals. Analyse an attack on a company and identify what motivated the hackers. Define the terms cybersecurity and network security, explain their importance, and distinguish between the two concepts. Describe the features of a network that make it vulnerable to attack. 1.1 To describe the security issues that may threaten system performance.
8	<ul style="list-style-type: none"> Consider how technology aids inclusivity in the workplace, especially for individuals with disabilities. <div style="background-color: #ffff00; padding: 2px;">PHSE Living in the wider world</div>	<ul style="list-style-type: none"> Describe the tasks performed by various network hardware components. Define a MAC address. Identify hardware components from scenarios and activity. Recognize the purpose and function of network hardware. Draw and describe different network topologies (star, bus, mesh, and ring). Evaluate the advantages and disadvantages of each network topology. Select an appropriate network topology for specific scenarios. 	<ul style="list-style-type: none"> Identify and describe non-automated forms of cyberattacks and learn how humans can be the weak links in an organization. Demonstrate knowledge of social engineering through role-playing activities and case studies. 1.2 To apply a range of security precautions to protect IT systems and data. 1.3 To describe the threats to system and information security and integrity.
9	<ul style="list-style-type: none"> Evaluate effective online communication. Identify essential skills required for the modern workplace. <div style="background-color: #ffff00; padding: 2px;">PHSE Living in the wider world</div>	<ul style="list-style-type: none"> Define wired and wireless networks. Describe different types of transmission media (e.g., fiber optic, copper, Bluetooth). 	<ul style="list-style-type: none"> Describe automated forms of cyberattacks. Analyse a real cyberattack and identify the network or software weaknesses that enabled it to happen.

SUBJECT: Computing & IT

		<ul style="list-style-type: none"> • Discuss the advantages and disadvantages of wireless networks compared to wired networks. • Describe factors affecting network performance (bandwidth, range, latency, number of devices). • Determine how network speeds are measured and perform calculations. 	<ul style="list-style-type: none"> • 1.4 To keep information secure and manage personal access to information sources securely.
10	<ul style="list-style-type: none"> • understand the purpose of cloud computing. • justifying the selection of communication platforms. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> • Describe the internet as a network of computer networks. • Understand the role of IP addresses and DNS in web browsing. • Explain how a web browser accesses the World Wide Web. • Describe how servers are used for hosting services on the internet. • Explain the roles of web servers and clients. • List advantages and disadvantages of cloud computing. 	<ul style="list-style-type: none"> • Identify how software can be used to protect from cyberattacks. • Describe how organizations use software to protect against cyberattacks. • 1.5 To describe ways to protect hardware, software, and data and minimize security risk
11	<ul style="list-style-type: none"> • Recognize methods of creating a network when mobile or remote working. • They should be able to evaluate the advantages and disadvantages of ad hoc networks <p>PHSE Living in the wider world.</p>	<ul style="list-style-type: none"> • Understand the need for standards in network communications. • Define network protocols and common protocols used (e.g., Ethernet, WiFi, HTTP, HTTPS, FTP, POP, SMTP, IMAP). 	<ul style="list-style-type: none"> • Explain the need for, and the importance of, network security. • Explain a number of methods of achieving network security. • 1.6 To apply guidelines and procedures for the secure use of IT.
12	<ul style="list-style-type: none"> • evaluate the impact of remote work on mental well-being and physical well-being. <p>PHSE Living in the wider world</p>	<ul style="list-style-type: none"> • Recognize the importance of network security. • Identify different forms of attacks on networks (social engineering, malicious code). 	<ul style="list-style-type: none"> • Describe different methods of identifying cybersecurity vulnerabilities, such as penetration testing, ethical hacking, network forensics, commercial analysis tools, review of network and user policies.

SUBJECT: Computing & IT

		<ul style="list-style-type: none"> • Explain network security methods. 	<ul style="list-style-type: none"> • 1.7 To describe why it is important to backup data and how to do so securely. • 1.8 To select and use effective backup procedures for systems and data.
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SUBJECT _____

Yr 11	Autumn Term 1	Spring Term 1	Summer Term 1
1	<ul style="list-style-type: none"> • 1.1 To identify what types of information are required for the presentation. • 1.5 To identify any constraints that may affect the presentation. <p style="background-color: #00ffff; display: inline-block; padding: 2px;">Numeracy - Data</p>	<ul style="list-style-type: none"> • 1.1 To identify what images are needed. • 1.5 To identify the context in which the images will be used. 	<ul style="list-style-type: none"> • 1.1 To identify what content and layout will be needed on the web page. • 1.2 To identify the purpose of the web page and the intended audience.
2	<ul style="list-style-type: none"> • 1.2 To enter text and other information using layouts appropriate to the type of information. • 1.3 To insert charts and tables into presentation slides. • 1.4 To insert images and video or sound to enhance the presentation. 	<ul style="list-style-type: none"> • 1.2 To obtain, input, and prepare images to meet needs. • 1.3 To identify what generic copyright and other constraints apply to the use of images. 	<ul style="list-style-type: none"> • 1.3 To select and use a website design template to create a single web page. • 1.4 To enter or insert content for web pages so that it is ready for editing and formatting.

SUBJECT: Computing & IT

	<ul style="list-style-type: none"> 1.6 To organize and combine information of different forms or from different sources for presentations. 		
	Numeracy - Data		
3	<ul style="list-style-type: none"> 1.7 To store and retrieve presentation files effectively, following local guidelines and conventions. 	<ul style="list-style-type: none"> 1.4 To combine information of different types or from different sources for images. 1.6 To identify which file format to use for saving and exchanging images. 1.7 To store and retrieve files effectively, following local guidelines and conventions. 	<ul style="list-style-type: none"> 1.5 To organize and combine information needed for web pages. 1.6 To identify copyright and other constraints on using other people's information.
4	<ul style="list-style-type: none"> 2.1 To identify what slide structure and themes to use. 2.2 To select, change, and use appropriate templates for slides. 	<ul style="list-style-type: none"> 2.1 To use suitable tools and techniques to create images. 	<ul style="list-style-type: none"> 1.7 To identify what file types to use for saving content. 1.8 To store and retrieve web files.
5	<ul style="list-style-type: none"> 2.3 To select and use appropriate techniques to edit slides and presentations to meet needs. 2.4 To select and use appropriate techniques to format slides and presentations. 2.5 To identify what presentation effects to use to enhance the presentation. 2.6 To select and use animation and transition effects appropriately to enhance slide sequences. 	<ul style="list-style-type: none"> 2.2 To use appropriate tools and techniques to manipulate and edit images. 	<ul style="list-style-type: none"> 2.1 To identify what editing and formatting to use to aid clarity and navigation. 2.2 To select and use website features to help users navigate simple websites.
6	<ul style="list-style-type: none"> 3.1 To describe how to present slides to meet needs and communicate effectively. 3.2 To prepare the slideshow for presentation. 	<ul style="list-style-type: none"> 2.3 To check images to ensure they meet needs, using IT tools and making corrections, as necessary. 	<ul style="list-style-type: none"> 2.3 To use appropriate editing and formatting techniques. 2.4 I check to ensure my web pages meet user needs using IT tools and make corrections as necessary. 3.1 To upload content to a website.

SUBJECT: Computing & IT

	<ul style="list-style-type: none"> 3.3 To check the presentation meets needs, using IT tools and making corrections, as necessary. 3.4 To identify and respond to any quality problems with presentations to ensure that presentations meet needs. 		<ul style="list-style-type: none"> 3.2 To respond appropriately to common problems when testing a web page.
	<u>Autumn Term 2</u>	<u>Spring Term 2</u>	
7	<ul style="list-style-type: none"> 1.1 To appreciate the development of CAD over time. 1.2 To list some of the uses of CAD. 	<ul style="list-style-type: none"> 1.1 To use simple techniques to plan the content and organization of multimedia products. 1.2 To identify the type of multimedia outcome to meet requirements. 	
8	<ul style="list-style-type: none"> 1.3 To list some of the tools available in CAD software. 1.4 To explain the strengths of CAD software. 1.5 To explain some of the weaknesses of CAD software. 	<ul style="list-style-type: none"> 1.3 To identify what is required in the specification. 1.4 To identify copyright or other constraints for using others' information. 	
9	<ul style="list-style-type: none"> 2.1 To develop some simple sketches to prepare for my design. 2.2 To list the main outcomes for my proposed design. <p>Numeracy -Shapes</p>	<ul style="list-style-type: none"> 2.1 To select and use an appropriate input device to enter content for multimedia outcomes. 2.2 To combine information of different types or from different sources for multimedia outcomes. 	
10	<ul style="list-style-type: none"> 2.3 To create a simple design. 2.4 To enhance my design with feedback. 2.5 To suggest some improvements to my design. <p>Numeracy -Shapes</p>	<ul style="list-style-type: none"> 2.3 To identify the file format and storage media to use. 2.4 To select and use appropriate software to write multimedia files. 	

SUBJECT: Computing & IT

		<ul style="list-style-type: none"> • 2.5 To store and retrieve multimedia files effectively, following local guidelines. 	
11	<ul style="list-style-type: none"> • 3.1 To understand a simple design brief. • 3.2 To list the processes I will use to carry out the brief. • 3.3 To create a design to the given brief. <p>Numeracy -Shapes</p>	<ul style="list-style-type: none"> • 3.1 To select and use appropriate techniques to edit and format multimedia outcomes. • 3.2 To manipulate images and graphic elements accurately. • 3.3 To check multimedia outcomes meet needs, using IT tools and making corrections as necessary. 	
12	<ul style="list-style-type: none"> • 3.4 To present the design to an audience for feedback. • 3.5 To act on the feedback to improve my design. 	<ul style="list-style-type: none"> • 4.1 To identify what display device to use for multimedia outcomes. • 4.2 To use appropriate techniques to navigate and display multimedia outcomes. • 4.3 To control the playback of multimedia files. • 4.4 To adjust display settings to meet needs. 	