Subject: Computing

Year: Year 7

Topic 1 Using computers effectively and safely	Topic 2 Networks	Topic 3 Scratch I	Topic 4 Edublocks	Topic 5 Spreadsheets	

• Considering best practice with passwords
• Choosing a secure password
• Logging on to school systems
• Efficient file management
• Basic functionality of software
• Online safety – including social media
• Personal data and keeping data safe
• Sourcing content online
	• Fundamentals of a computer network
	  • Transmission of data between devices
	  • Understanding protocols
	  • Hardware required within a computer network
	  • Wired and wireless network comparisons
	  • Rate at which data can be transmitted – Bandwidth
	  • Packets of data and transferring
		• Compare how humans and computers understand instructions (understand and carry out)
		• Define a sequence as instructions performed in order, with each executed in turn
		  • Modify a sequence
		  • Predict the outcome of a simple sequence -Define a variable as a name that refers to data being stored by the computer
		  • Make a sequence that includes a variable
		  • Predict the outcome of a simple sequence that includes variables
			• Assessing the difference between input and output
			• Constructing a sequence of instructions in the correct order
			• Construction of a program that will output data
			• Write a program that will input data
			• Assess the difference between sequence and selection
			• Write a program that uses selection with two
				• 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 replicate cell data
				• Explain the difference between data	

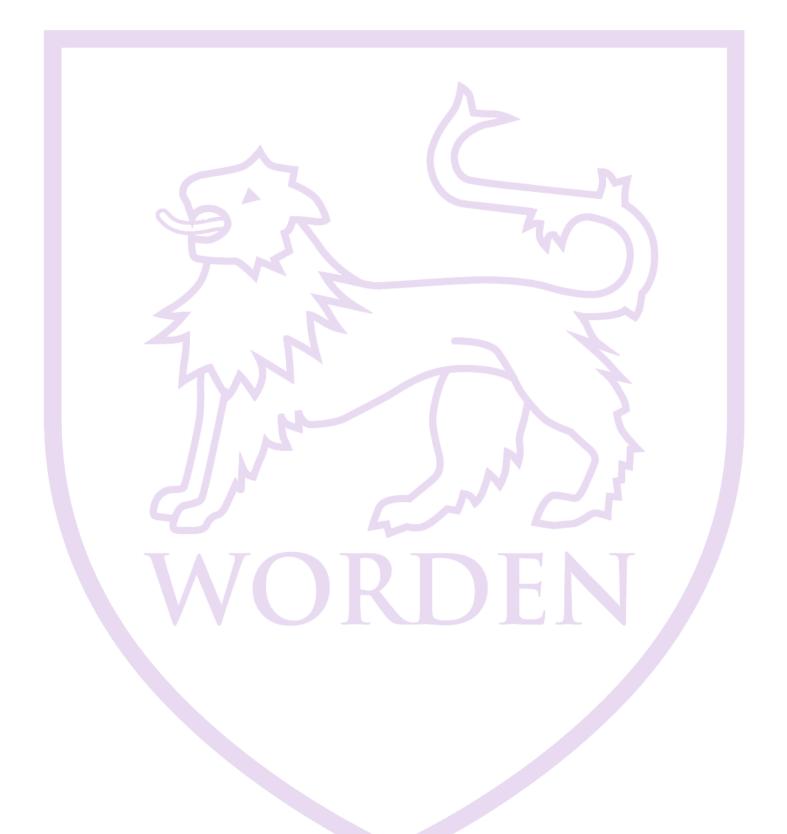|					
- The impact of cyber bullying - Basic digital skills and features of different software - Choosing an appropriate piece of software for a task - Constructing a digital piece of work	- these over a network - Difference between Internet and World Wide Web - Services provided over the Internet - Connectivity and the Internet of Thing (IoT) - Impact of Internet connected devices - Components of a network when requesting data from the Web	- Recognise that computers follow the control flow of input/process/output - Trace the values of variables within a sequence - Define a condition as an expression that will be evaluated as either true or false - Identify that selection uses conditions to control the flow of a sequence - Identify where selection statements can be used in a program - Modify a program to include selection - Create conditions that use comparison operators (>,<,=) - Create conditions that use logic operators (and/or/not) - Identify where selection statements can be used in a	- outcomes. (IF-ELSE) - Write a program that uses selection with more than two outcomes (IF-ELIF-ELSE) - Consider the role of iteration in a program - Construct a program that draws basic shapes using counter-controlled iteration (FOR loop) - Adapt a program for the number of times it needs to repeat for a given purpose - Write an algorithm that will help you create a solution to a problem	- and information - Explain the difference between primary and secondary sources of data - Collect data - Analyse data - Create appropriate charts in a spreadsheet - Use the functions SUM, COUNTA, MAX, and MIN in a spreadsheet - Use a spreadsheet to sort and filter data - Use the functions AVERAGE, COUNTIF, and IF in a spreadsheet - Use conditional	

			program that include comparison and logical operators • Define iteration as a group of instructions that are repeatedly executed • Describe the need for iteration • Detect and correct errors in a program (debugging) • Identify where count-controlled iteration can be used in a program • Implement count-controlled iteration in a program • Independently design and apply programming constructs to solve a problem (subroutine, selection, count-controlled iteration, operators, and variables)	• Construct a shape maker program using IF-ELSE. • Extending a program to make use of multiple conditions IF-ELIF-ELSE	formatting in a spreadsheet • Apply all of the spreadsheet skills covered in this unit	

WORDEN

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