COMPUTING

Year	Subject	AP	Band A	Band B	Band C

7	Computing	AP1	Students can:
			• Produce a presentation where:
			  ○ There are some larger blocks of text on slides, but these are infrequent.
			  ○ Most images are used effectively and are relevant to the subject
			  ○ Most content is relevant to the subject
			  ○ Most images, text, and content are appropriate for the audience
			• Present their slides to a high standard and within a set timeframe
			• Use the school network safely and respectfully
			Independently:
			• Use cell references
			• Use the autofill tool.
				Students can:
				• Produce a presentation where:
				  ○ Only text prompts are used and text is kept to a minimum.
				  ○ Images are used effectively and are relevant to the subject
				  ○ All content is relevant to the subject
				  ○ All images, text, and content are appropriate for the audience
				• Present their slides to a high standard and within a set timeframe
				• Use the school network safely and respectfully
				With some help:
				• Name cell references.
				• Use the autofill tool.
					Students can:
					• Produce a presentation where:
					  ○ Only text prompts are used and text is kept to a minimum.
					  ○ images are used effectively and are relevant to the subject
					  ○ All content is relevant to the subject
					  ○ All images, text, and content are appropriate for the audience
					• Present their slides to a very high standard and within a set timeframe
					• use the school network safely and respectfully
					• show a deep understanding of the issues around online safety
					With help:
					• Name a cell reference.

			• Use all tools to format Data. • Create formulas for add, subtract, divide, and multiply, • Create functions for SUM, COUNTA, AVERAGE, MIN, MAX, and COUNTIF. • Sort and filter data • Create graphs and use conditional formatting	• Use simple tools to format Data. • Create formulas for add, subtract, divide, and multiply. • Create functions for SUM, AVERAGE, MIN and MAX. • Sort and filter data. • Create bar graphs.	• Use the autofill tool. • Use BOLD and UNDERLINE to format Data. • Create formulas for add, subtract, divide, and multiply. • Create functions for SUM, MIN and MAX. • Sort and filter data • Create a graph.
7	**Computing**	**AP2**	Students can: • Use more than one subroutine as a group of instructions that will run when called by the main program or other subroutines • Use and Implement condition-controlled iteration in a program. • A subroutine is used to populate the word list	Students can: • Use more than one subroutine as a group of instructions that will run when called by the main program or other subroutines. • Create a program that will respond to different inputs and reply with appropriate outputs.	Students can: • Use a subroutine as a group of instructions that will run when called by the main program or other subroutines • Be able to create a program that will allow decisions to be made. • The word list has been copied accurately
8	**Computing**	**AP1**	Students can:	Students can:	Students can:

			• Provide broad definitions of 'artificial intelligence' and 'machine learning'. • Identify examples of artificial intelligence and machine learning in the real world. • Describe the steps involved in training machines to perform tasks (gathering data, training, testing). • Describe how machine learning differs from traditional programming. • Associate the use of artificial intelligence with moral dilemmas. • Explain the implications of sharing program code. • Produce a functioning web page. • Webpage will contain Hyperlinks. • Page will contain images that will enhance the information on the webpage. • Use correct formatting. • Create multiple pages. • Add features such as lines to break up the pages.	• Analyse how the hardware components used in computing systems work together in order to execute programs. • Define what an operating system is, and recall its role in controlling program execution. • Describe the NOT, AND, and OR logical operators, and how they are used to form logical expressions. • Use logic gates to construct logic circuits, and associate these with logical operators and expressions. • Describe how hardware is built out of increasingly complex logic circuits. • Recall that, since hardware is built out of logic circuits, data and instructions alike need to be represented using binary digits. • Produce a functioning web page. • Include a small number of Hyperlinks to an external page. • Include appropriate images.	• Describe the function of the hardware components used in computing systems. • Describe how the hardware components used in computing systems work together in order to execute programs. • Recall that all computing systems, regardless of form, have a similar structure ('architecture'). • Produce a functioning web page. • Include one Hyperlink to an external page. • Include appropriate images. • Format the page correctly.

				• Format the page correctly. • Add additional features.	
8	Computing	AP2	Students can: • Show their app is fully functional and meets all of the success criteria. • Successfully implement and extend the project to include: - Event handling - Variables - Selection - Iteration • All Screens created should be created with the user in mind and be suitable for the game in question. • Game should work fully as described in the brief	Students can: • Ensure their app is mostly functional and meets most of the success criteria. • Implement: - Event handling - Variables - Selection. • Create 3 screens that are well designed and relevant to the game • Game should work as described in the brief scoring system may not be accurate.	Students can: • Ensure that their App is partially functional and only meets some of the success criteria. • Successfully used an event handler to perform an action triggered by the user. • Create 2 screens that are well designed and relevant to the game • The game should be at least playable. Scoring may not work.
9	Computing	AP1	Students can: • Explain how contributors to social media may be 'social bots'. • Explain what malware is and give some examples of how it operates and what its impact could be on a device or user	Students can: • Understand what is meant by 'social bots'. • Give an example of how malware operates and what its impact could be on a device or user	Students can: • Know what is meant by 'social bots'. • Understand what malware is and give an example of how it operates and what its impact could be on a device or user

			(e.g. viruses, trojans, ransomware). • Explain how to manage security software (e.g. anti-virus, security patches, adware blockers) on devices and understand why regular updates are important. • Explain how and assess when more secure use may require more advanced password management (e.g. dual-factor authentication, regular rolling, security questions, CAPTCHA, biometrics). • Provide a minimum of two questions, both of which are appropriately framed and can be investigated further using data • Provide a sensible prediction as to what they think the answer to at least two of the questions will be • Produce a comprehensive list of data that needs to be collected, all of which is suitable and relevant to the problem • Create a fully appropriate data capture form and collected and	(e.g. viruses, trojans, ransomware). • Have an understanding of how to manage security software (e.g. anti-virus, security patches, adware blockers) on devices and know why regular updates are important. • Understand more advanced password management techniques such as (dual-factor authentication, regular rolling, security questions, CAPTCHA, biometrics). • Pose at least one question which is appropriate to the scenario and can be investigated using data • Provide a sensible prediction as to what they think the answer to at least one of the questions will be • Produce a list of data that needs to be collected, most of which is suitable and relevant to the problem • Create an appropriate data capture form and collect data to analyse	(e.g. viruses, trojans, ransomware). • Have some understanding on how to manage security software (e.g. anti-virus, security patches, adware blockers) on devices and know why regular updates are important. • Understand more advanced password management techniques such as (dual-factor authentication, regular rolling, security questions, CAPTCHA, biometrics). • Attempt to provide a question that could be used to help solve the problem • Attempt to provide a prediction of what the answers to the questions will be • Produce a list of data that needs to be collected, some of which is suitable and relevant to the problem • Create a partially complete data capture form and include a small number of entries to analyse

			has clearly spent time collecting a good set of data to analyse • Cleanse the data so that it is free from errors • Create visualisations to answer both questions that compare at least two variables to help answer their questions • Write a detailed and thoughtful analysis of what they can learn from their findings • Write a thoughtful and reflective conclusion that makes sensible recommendations as to what the next steps should be; all recommendations are backed up by their findings.	• Attempt to cleanse the data and correct or remove any errors • Create visualisations that compare at least two variables to help answer their questions • Write a sensible analysis of what they can learn from their findings • Write a conclusion that reflects on their findings and makes a sensible recommendation as to what the next steps should be.	• Attempt to cleanse the data, but errors may still exist when it is analysed • Create one or more visualisations, at least one of which attempts to use the data to answer the questions posed • Make little or no attempt to analyse their findings • Attempt a conclusion that makes at least one recommendation; recommendation may not be fully justified against their findings.
9	**Computing**	**AP2**	Students can: • Write programs that display messages and receive keyboard input and use simple arithmetic expressions in assignment statements. • Perform common operations on lists or individual items.	Students can: • Write programs that display messages and receive keyboard input and use simple arithmetic expressions in assignment statements. • Perform common operations such as adding to and removing items from lists.	Students can: • Write programs that display messages and receive keyboard input • Perform common operations such as adding to lists.

			• Use iteration (while statements) to control the flow of program execution by creating a shopping list with more than 5 items or finishing the list on a keyword. • Use one IF ,more than one Elif and an Else Statement. • Be Able to apply their programming skills to add to a premade program. Adding If, Elif and Else statements. Adding to the code to make a design for the program.	• Use iterations (while statements) to control the flow of the program by creating a shopping list with more than 5 items. • Use If, Elif and Else Statements. • Be Able to apply their programming skills to add to a premade program. Including adding If, Elif and Else Statements.	• Use an iteration (while statement) to control the flow of program execution. • Use If and Else statements. • Be Able to apply their programming skills to add to a premade program.