

## Y9 IT & COMPUTING

<p>PLATINUM</p>	<p>Express algorithms as flowcharts and written description.</p> <p>Accurately develop an algorithm into a flowchart and find ways to improve its efficiency and effectiveness.</p> <p>Demonstrate the use of pseudocode to solve a problem.</p> <p>Convert an algorithm into an accurate flowchart with only minor errors.</p>	<p>Create a program that can perform a range of mathematical calculations.</p> <p>Demonstrate the use of multiple data types within a single program.</p> <p>Demonstrate add to, amend, restructure and search a list.</p> <p>Be able to write an 'if – else if – else statement' independently.</p> <p>Be able to create a program using Python that uses more than 1 procedure or function in its operation.</p>	<p>To be able to explain the hexadecimal number system.</p> <p>To be able to convert hexadecimal to denary and vice versa up to 255.</p> <p>To be able to convert hexadecimal to binary and vice versa.</p> <p>To be able to explain the use of hexadecimal numbers to represent binary numbers.</p>	<p>Annotate the spreadsheet to demonstrate clear understanding of why I am using specific formula and functions.</p> <p>To be able to create a report based on queries.</p> <p>Complete all tasks without help. Annotate the database clearly explaining why you have taken those steps.</p>	<p>Identify input and output devices for more complex scenarios.</p> <p>Explain how characters are encoded using the ASCII system.</p> <p>Use an ASCII reference chart to convert a character into binary and its decimal equivalent.</p>	<p>I have successfully added some ActionScript to a button to create interaction.</p> <p>My plan is very clear and could be used by someone else to produce a very similar animation.</p> <p>I can explain why an animation I produced is suitable for a specific audience and purpose</p>
<p>GOLD</p>	<p>Identify the sequence of actions to solve a problem.</p> <p>Determine the order of a sequence to correctly solve a problem.</p> <p>Develop an algorithm.</p> <p>create a comprehensive flowchart that describes a problem.</p>	<p>Create a program that performs calculations on 2 numbers.</p> <p>Write informative comments.</p> <p>Use appropriate datatypes.</p> <p>Restructure a list using the correct technique when programming using Python.</p> <p>Be able to write an 'if statement' program independently.</p> <p>Write a program in Python that requires a process to be repeated, therefore using iteration, independently.</p>	<p>Develop a logical, original cipher code and use this code to write an encrypted message.</p> <p>Convert positive denary whole numbers (0-255) into 8-bit binary numbers and vice versa.</p> <p>Learn a technique to help create a strong and memorable password to protect school work and online privacy.</p>	<p>Use If statements and conditional formatting when required.</p> <p>Create a chart with appropriate axis and labels. To know what data validation and data verification is and apply these rules to a database.</p> <p>Complete all tasks with some help. Added action buttons and hyperlinks to the presentation.</p>	<p>Perform simple binary arithmetic.</p> <p>State strengths and weaknesses of different storage devices Describe briefly how data is stored on a CD.</p>	<p>Use a wide selection of drawing and animation techniques to create an animation that is suitable for a specific audience and purpose.</p>
<p>SILVER</p>	<p>Explain what algorithms are used for.</p> <p>Draw a simple flowchart making use of correct symbols.</p>	<p>Perform simple mathematical calculations Write comments against some of their code previously written.</p> <p>Explain what a variable is procedures and functions in the creation of a simple program.</p>	<p>Confidently decrypt and encrypt messages using ciphers.</p> <p>Understand how computer viruses are transmitted, how to recognise them and how to reduce the risks of downloading them.</p>	<p>To be familiar with the names of the parts of a spreadsheet and apply formula.</p> <p>Use simple operators.</p> <p>Create a PowerPoint with the specification met.</p> <p>Create a form for the table and add command buttons.</p>	<p>Give examples of computer hardware and software.</p> <p>Suggest appropriate input and output devices for a simple scenario.</p> <p>Explain what RAM and ROM are used for.</p>	<p>Use multiple layers Use tweening and frame-by-frame techniques.</p> <p>Create an animation that carries an effective message.</p> <p>Add sound effects.</p>

# BRONZE

					Show how numbers and text can be represented in binary.	
	<p>Describe what an algorithm is and convert an algorithm into a flowchart.</p> <p>There may be inaccuracies or errors.</p> <p>Understand how a flowchart works.</p>	<p>Write a simple program with an output using IDLE.</p> <p>Create a simple program with an output that can be saved.</p> <p>Create a program that can ask for an input and return the input as part of a message.</p> <p>Use the correct symbol to indicate a comment.</p>	<p>Decrypt at least one hieroglyphic message and one Caesar cipher message.</p> <p>Understand the importance of secure passwords.</p>	<p>To effectively evaluate existing logos. Use graphic software to create your own logo and poster.</p> <p>To understand what a database is and why we use databases</p> <p>To be able to add, edit and delete data in a database.</p>	<p>Distinguish between hardware and software.</p> <p>Draw a block diagram showing CPU, input, output and storage devices.</p> <p>Name different types of permanent storage device</p> <p>Explain the impact of future technologies.</p>	<p>Create a simple animation using simple drawing and frame-by-frame techniques.</p> <p>Explain how frame rate and speed affect the smoothness of the animation.</p> <p>Create an animation that carries a simple message.</p>