## **COMPUTER SCIENCE**

# YEAR 8 PROGRESS HIERARCHY



	Demonstrating	Applying Knowledge	Design and Create	Analyse and Develop
	Knowledge and Understanding	and Understanding		
	Can demonstrate knowledge and understanding of most the key	<ul> <li>Can apply knowledge and understanding of most of the</li> </ul>	Can produced a good design to create a solution that covers some	Able to complete a thorough analysis of the given scenario identifying some
Mastering	concepts; Hardware and Software, Organisations Skills, iPad Use, Application use, Hardware Components, Health and Safety, Ethical, Legislations • Can identify and explain most of the component of a Computer System (CPU, RAM, ROM, Motherboard, HDD, CPU components) • can develop a model by adding different functions and formulas. • can discuss advantages and disadvantages. can present information in a variety of ways and show a clear sense of audience • can confidently use my model to make predictions; I can explain the consequences of changing values to help predict an outcome. I can use conditional formatting to enhance the spreadsheet using" if "statements.	following: Data Representation, Binary, Decimal, Hexadecimals, Addition, and Counting. • Can Explain why computers can work only with binary.	stated objectives • Identified and described most of the inputs and outputs facilities to be provided by the user interface which will be fit for purpose • Can design and create using most of the skills obtain from; HTML, URL, Web, DNS, Server, IP Address, The Internet, Networks, Cybersecurity • Can design and create a 4 pages' website fully formatted and hyperlinked	of the requirements: • data required to create an effective solution • processing to be carried out by the solution • required outputs from the solution Produced a detailed set of objective, that are measurable, that define clearly the tasks required to create effective and fully functional solution • Create an algorithm and or flowchart for solution Create a report including some sections from the following: analysis design, implementation, testing and evaluation.
Deepening	<ul> <li>Can demonstrate knowledge and understanding of some of the key concepts; Hardware and Software, Organisations Skills, iPad Use, Application use, Hardware Components, Health and Safety, Ethical, Legislations</li> <li>Can identify and explain some of the component of a Computer System (CPU, RAM, ROM, Motherboard, HDD, CPU components)</li> <li>Can organise folders, name conventions, use emails, GoodNotes and google images including settings and backups.</li> <li>can develop and refine my work to enhance its quality, using a greater range and complexity of information. This includes some functions (Average, Min, Max)</li> <li>can identify how a spreadsheet can be useful</li> <li>I can understand the importance of changing variables and the effects these will have on my model. I can write a prediction and be able to test that prediction to check for accuracy</li> <li>can use goal seek to determine the level a variable would need to be, in order to achieve a required result.</li> </ul>	• Can apply knowledge and understanding of most of the following: Data Representation, Binary, Decimal, Hexadecimals, Addition, and Counting.	<ul> <li>Can produced a design to create a solution that covers some stated objectives</li> <li>Identified fully and described some of the inputs and output facilities to be provided by the user interface which will be fit for purpose</li> <li>Can design and create using some of the skills obtain from; HTML, URL, Web, DNS, Server, IP Address, The Internet, Networks, Cybersecurity</li> <li>Can design and create a 3 pages' website fully formatted and hyperlinked</li> </ul>	Able to complete an analysis of the given scenario identifying few of the requirements: • data required to create an effective solution • processing to be carried out by the solution • required outputs from the solution Produced a set of objectives, that are measurable, that define clearly the tasks required to create effective and fully functional solution • Create an algorithm and flowchart for solution
	<ul> <li>Can demonstrate knowledge and understanding of a few of the key concepts; Hardware and Software, Organisations Skills, iPad Use, Application use, Hardware Components, Health and Safety,</li> </ul>	• Can apply knowledge and understanding of a few of the following: Data Representation, Binary, Decimal, addition and Counting.	<ul> <li>Can produce a design to create a solution that covers few of the stated objectives</li> <li>Identified and described few of the input and output facilities to be provided by the user interface which</li> </ul>	Able to complete an analysis of the given scenario identifying one of the requirements: • data required to create an effective solution • processing to be carried out by the

## Securing

Ethical, Legislations • Can identify and explain a few of the components of a Computer System (CPU, RAM, ROM, Motherboard, HDD, CPU components) • Can do most of the following; organise folders, name convention, use emails, GoodNotes and google images including settings and backups. • Can design and create a spreadsheet using many formulas and some functions (sum, min, average, total). can also use formatting • Can understand the importance of changing variables and the effects these will have on my model. I can write a prediction and be able to test that prediction to check for accuracy.

### will be fit for purpose • Can design and create using few of the skills obtain from; HTML, URL, Web, DNS, Server, IP Address, The Internet, Networks, Cybersecurity • Can design and create a 2 pages' website fully formatted and hyperlinked

#### solution

required outputs from the solution
 Produced a set of objectives, that are measurable, that define clearly the
 tasks required to create effective and fully functional solutions.
 Create an algorithm and or flowchart for solution

	• Can organise, store, retrieve			
	information using logical and appropriate structures and always find my work.			
Developing	<ul> <li>Can demonstrate knowledge and understanding of one of the key concepts:         <ul> <li>Hardware and Software,</li> <li>Organisations Skills, iPad Use,</li> <li>Application use, Hardware</li> <li>Components, Health and Safety,</li> <li>Ethical, Legislations</li> <li>Can identify and explain one of the components of a Computer System</li> <li>(CPU, RAM, ROM, Motherboard, HDD, CPU components)</li> <li>Can do a few of the following;</li> <li>organise folders, name conventions,</li> <li>use emails, GoodNotes and google images including settings and backups.</li> <li>Can design and create a spreadsheet using several simple formulas and formatting.</li> <li>Understand what a row, column and cell reference is in a spreadsheet.</li> <li>Can organise, store and retrieve my work.</li> <li>Can present my work in different forms using Excel</li> </ul> </li> </ul>	• Can apply knowledge and understanding of a few of the following: Data Representation, Binary, Decimal, and Addition.	<ul> <li>Can produced a design to create a solution that covers one of the stated objectives</li> <li>Identify and describe a few of the inputs and outputs facilities to be provided by the user</li> <li>interface which will be fit for purpose</li> <li>Can design and create using one of the skills obtain from; HTML, URL, Web, DNS, Server, IP Address, The Internet, Networks, Cybersecurity</li> <li>Can design and create a 1 pages' website fully formatted and hyperlinked</li> </ul>	Able to complete an analysis of the given scenario identifying one of the requirements: • data required to create an effective solution • processing to be carried out by the solution • required outputs from the solution Produced a few objectives, that are measurable, that define clearly the tasks required to create effective and fully functional solution Create an algorithm and or flowchart for solution
Emerging	<ul> <li>Can demonstrate knowledge and understanding of one of the key concepts:         <ul> <li>Hardware and Software,</li> <li>Organisations Skills, iPad Use,</li> <li>Application use, Hardware</li> <li>Components, Health and Safety,</li> <li>Ethical, Legislations</li> <li>Finds very difficult to identify and explain one of the component of a</li> <li>Computer System (CPU, RAM, ROM, Motherboard, HDD, CPU components)</li> <li>Can do one of the following;</li> <li>organise folders, name convention,</li> <li>use emails, GoodNotes and google images including settings and backups.</li> <li>Can state what a spreadsheet model is.</li> </ul> </li> <li>Can understand that a spreadsheet can be use in the real world.</li> <li>Understand what a row, column and cell is.</li> <li>Can create a spreadsheet and enter a formula to calculate a result.</li> </ul>	• With help can apply knowledge and understanding of a few of the following: Data Representation, Binary, Decimal, and Addition.	<ul> <li>Can produce a design to create a solution that covers one of the stated objectives</li> <li>Identified few of the input and output facilities to be provided by the user interface which will be fit for purpose</li> <li>Can design and create using one of the skills obtain from; HTML, URL, Web, DNS, Server, IP Address, The Internet, Networks, Cybersecurity</li> <li>Can design and create a 1 page website with some formatting and some hyperlinks</li> </ul>	<ul> <li>Carried out a superficial analysis of the given scenario that has only partially identified one of the requirements:</li> <li>data required to create an effective solution</li> <li>processing to be carried out by the solution</li> <li>required outputs from the solution Create an algorithm and or flowchart for solution</li> </ul>