

Y8 Computer Science Rationale GBIC groups AMENDMENT 2021-22

YEAR 8	Content	Learning and Skills
Autumn Half Term 1	Unit 1 Understanding computer systems	Able to interpret device specifications.
Autumn Half Term 2	GBIC Data Representation	Know why all data is represented in binary in a computer Recall that characters can be represented as sequences of symbols and list examples of character coding schemes Measure the length of a representation as the number of symbols that it contains Provide examples of how symbols are carried on physical media Define a Bit, Byte, Kb, Mb and Gb Convert decimal (denary) integers to binary numbers Convert binary numbers to decimal (denary) integers
Spring Half Term 1	GBIC Python Programming	Describe what algorithms and programs are and how they differ Recall that a program written in a programming language needs to be translated to be executed by a machine Write simple Python programs that display messages, assign values to variables, and receive keyboard input Locate and correct common syntax errors

<p>Spring Half Term 2</p>	<p>Unit 2 Graphics and Animation</p>	<p>Create and manipulate a simple group of objects to form a logo design.</p> <p>Change the saturation, brightness and contrast in an image. Add text to a graphic.</p> <p>Use a graphics package to create an artwork, for example, a movie poster.</p> <p>Use keyframe animation to create a moving graphic.</p>
<p>Summer Half Term 1</p>	<p>Unit 3 HTML and Website development Using WebLab and Repl.it</p>	<p>Write HTML code to create a simple web page and display it in a browser.</p> <p>Create a simple navigation system using HTML.</p> <p>Use a design template for a web site using a web authoring application.</p> <p>Create a multi-page website.</p> <p>Insert text, images and links on their web pages.</p>
<p>Summer Half Term 2</p>	<p>Unit App development in AppLAB</p>	<p>Plan and design an app (e.g. for a revision quiz for a topic of their choice).</p> <p>Create a simple GUI.</p> <p>Create a variety of screens within their app and link between them.</p> <p>Use the Blockly Visual Programming editor to add functionality.</p> <p>Test their app to ensure all parts of it work.</p>

End of Summer Term	Computer crime and cyber security Recognise fraudulent emails and protect themselves effectively from unwittingly giving personal information (e.g. account numbers and passwords) or otherwise being defrauded	It is important to revisit and extend the esafety topics introduced at the beginning of Year 7. Students will have more of an awareness now of the ever-increasing impact of technology on the world around them. They will know that there is criminal activity involving technology and the Internet, and students are interested in knowing what some of the laws are.
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