# Curriculum Map - KS3 Computing

**Subject: Computing**                                                                 **Year Group: Year 8**

|  | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
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| **Content Descriptive/propositional knowledge** <br><br> **'knowing that'** | **E-Safety** <br><br><br> know that we have a responsibility to protect ourselves and others when using online environments. | **Understanding Computers** <br><br><br> know that computers are made up of digital and many physical components | **Graphics** <br><br><br> know different forms that digital graphics can take, and that different graphics can be used for different purposes. | **HTML & Web Development** <br><br><br> Know how websites are planned, structured, designed and styled. | **Computational Thinking** <br><br><br> know what binary is and how it is used in computing <br><br> knowing how to break problems down | **Intro to Python** <br><br> know that programming languages can be used to create programs for computers to perform certain tasks. |
| **Skills Ability knowledge** <br><br> **'knowing how'** | Understand the specific issues relating to : <br> ● Cyberbullying <br> ● Online Predators <br> ● Inappropriate Content <br> ● Damaged Reputations <br> ● Publicising Personal Information | Knowing how: <br><br> * Software differs from hardware <br> * How different hardware components of a PC work <br> * Input and Output devices differ <br> * Data is stored | Knowing how: <br><br> * Bitmap and Vector images are structured <br> * To combine different images to make a logo <br> * To combine images, graphics and text <br> * To use a graphics editor to a fundamental degree | Knowing how: <br><br> * HTML code looks and is used to structure web pages <br> * CSS code looks and is used to style web pages <br> * Hyperlinks and Navigation systems are used <br> * Text, Graphics, images and links can enhance web pages <br> * To design a website | Knowing how: <br><br> * Computers can use binary input in complex ways <br> * Logic gates work <br> * Problems can be broken down in to smaller, simpler pieces <br> * Algorithms can be developed to solve problems or perform tasks. | Knowing how: <br><br> * To run simple python programs <br> * To plan algorithms using pseudocode <br> * To use different data types appropriately (string, integer etc.) <br> * Syntax and Logic errors differ <br> * Comments can document and explain sections of code |

| Key Questions | What is cyberbullying and what can be done about it?<br><br>How can I protect myself when using the internet?<br><br>How can I take advantage of digital tools safely? | What are the hardware and software components that make up computer systems, and how do they communicate with one another and with other systems?<br><br>How is data stored and used within a computer system? | How are various types of data(including text, sounds and pictures) represented and manipulated digitally?<br><br>How can different types and styles of graphics appeal to different audiences? | How can HTML and CSS be used to structure and style a website?<br><br>How can I design a website to meet the needs of a particular audience?<br><br>How can I use images, text and links to enhance the quality of my web pages? | What is binary and why do computers use it?<br><br>How do computers 'think'?<br><br>How can we manage complex problems by breaking them down into simpler ones? | How can programming languages and algorithms be used to solve a variety of computational problems?<br><br>What are the different key data structures and when should they be used? |
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| **Assessment** | 5 week formative worksheets<br><br>E-safety online test (40 marks) | 6 week formative worksheets<br><br>Understanding Computers online test (40 marks) | 5 week formative worksheets<br><br>Peer-assessed/formative movie poster project. | 5 week formative worksheets<br><br>Website portfolio project (Assessed on a basic, intermediate, advanced, expert scale). | 6 week formative worksheets<br><br>Computational Thinking online test (40 marks) | 6 week formative worksheets<br><br>Python programming project (Assessed on a basic, intermediate, advanced, expert scale.) |
| **Literacy/ Numeracy/ SMSC/ Character** | Development of resilience, kindness & respect and peer support. | Development in communication/literacy skills<br><br>Numeracy skills through calculating/converting Binary. | Development in communication/literacy skills | Development in communication/ literacy skills | Development in communication/ literacy skills<br><br>Developing logical problem solving/calculation skills. | Development in communication/ literacy skills<br><br>Developing logical problem solving/calculation skills. |