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| **Year 8 Computing** | | | | | | |
| **Curriculum intent** | We believe that students deserve a Computing and ICT curriculum which prepares them for the digital and fast paced world they live in.  Covering the three strands of the computing national curriculum, Computer Science, ICT and Digital Literacy, our aim is to give our students the skills and abilities to engage positively with the digital world and take advantage of all the opportunities that come their way both in the UK and in the wider world.  Our computing key stage 3 curriculum enables students to use computational thinking and creativity to solve real world problems by developing a wide range of skills in both programming and ICT, using multiple packages selected to spark and foster interest and creativity. Students will learn resilience and that making mistakes is part of learning, giving them the confidence to tackle a variety of independent learning activities.  Students will be taught to navigate this new digital world safely and be aware of the dangers that they now face.  Students will also begin studying for their IDEA Programme Bronze badge which will help develop their digital, employability and entrepreneurial skills. | | | | | |
| **Term** | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Knowledge** | **E- Safety**  What are the dangers of the internet to teenagers  Why is it important to keep your account settings private?  Dangers of online gaming  **Advanced Binary:**  Recap of converting binary  What is a hexadecimal number?  How do computers use Boolean Logic?  **Manipulation of digital artefacts**  Develop a knowledge of images using a 1bit image representation  Use photoshop to create a logo for a music festival  **Computing Theory**  Input, Output and Storage Devices  Hardware and Software | | **The Internet and HTML**  How the internet works  Why is reliability of websites important and how to tell if a website is reliable  HTML and CSS: What tags are used to create a professional Website  What is a computer network and protocols?  What are the key hardware components found in a network | **Introduction to Python**  What is a variable and how is it used in programming?  What is selection and how is it used in programming?  What are lists and conditional loops and how are they used in computer programming  What are inputs and outputs. | | **Advance Spreadsheets: Music Festival**  What are advanced functions such as count if?  What are If statements  What are look up tables  What is spreadsheet modelling |
| **Skills** | Microsoft Word  Cover binary numbers to hexadecimal and vice versa  Solving AND,OR,NOT gates  Using a variety of tools in photoshop to create a logo | | Recall of information  PowerPoint  Searching the Web effectively using advanced searching techniques.  Use of HTML and CSS to create a website | Writing code to solve problems using:  Variables  Selection  Lists  Conditional loops  Inputs and Outputs | | Solving real world problems using advanced spreadsheets skills such as:  Count If  If Statements  Look up tables  Spreadsheet modelling |
| **Assessments** | Binary Assessment  Completed logo | | Written Assessment.  Staying Safe online Website created in HTML | Python Assessment: Writing code to solve real life problems | | Music Festival Spreadsheet |
| **Curiosity** | <https://kidshelpline.com.au/teens/issues/staying-safe-online> - Kids Helpline website for tips and advice - Anytime any reason | | The Social Network – Netflix or Amazon Prime  <https://www.youtube.com/watch?v=hGXZjlDSXyg> – The History of computing  <https://alejandrorioja.com/how-does-google-make-money/> - How google makes their money  <https://www.youtube.com/watch?v=XYTwYmOjqQs>  Evolution of web design | <https://www.python.org/about/gettingstarted/> - Python for beginners website  <https://www.youtube.com/watch?v=rfscVS0vtbw> – Python tutorials for beginners | | <https://www.youtube.com/watch?v=wDMo4cFxWq0> - Microsoft video showing best practice for advance modelling spreadsheet |

**Extra Curricular:**

* Coding Club
* Digital Leaders
* Internet Safety Day Logo Competition
* Ideas Programme
* Completion of ideas programme silver badge
* Trip to encourage larger intake for CS – TBC
* Enterprise Challenge Day
* Cadburys world Trip - TBC