

YEAR 8 CURRICULUM INFORMATION – BUSINESS AND COMPUTING

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| | Summer 1 | | Summer 2 | |
| What will students be learning? | Students will study the topic ‘Data Representation’ which follows on from their understanding of how data is represented digitally using binary. In this topic students will look specifically at how binary is used to represent text, sound, and images. | | Students will study ‘Computational Thinking’ and ‘Algorithms’ to understand how computers think (abstractions) and how this relates to solving real world problems. By doing this, students will understand how computers use instructions (algorithms – pseudo-code/flowcharts) to help us programme and solve these problems. | |
| How will students be assessed? | Students will be assessed on each topic (‘Data Representation’, ‘Computational Thinking’ and ‘Algorithms’) with a set of multiple-choice and short answer questions (10 marks). | | | |
| Literacy – What keywords will be taught? | <ul style="list-style-type: none">• Binary• ASCII (American Standard Code for Information Interchange) | <ul style="list-style-type: none">• Pixel• Sampling• Compression | <ul style="list-style-type: none">• Decompression• Patter Recognition• Abstraction• Algorithms• Flowchart | <ul style="list-style-type: none">• Bubble sort• Binary/linear search• Pseudocode• Iteration• Logical reasoning |
| What employability skills are being developed? | Problem solving skills, logical reasoning, and numeracy. | | | |
| Wider Curriculum Links? | Numeracy, specifically calculating using formulae, adding, subtracting and logical reasoning within these topics. | | | |
| What useful websites are there for this topic? | KS3 Computer Science - BBC Bitesize Cisco's Binary Number Game [Binary Blitz]. Penjee's adaptation. How Computers Work - YouTube | | | |
| What wider reading could be done for this topic? | Learn Computer Science - Code.org | | | |
| What else can students be doing independently to develop their understanding of this topic? | Go onto Seneca Learning at complete the KS3 Computer Science course. Free Homework & Revision for A Level, GCSE, KS3 & KS2 (senecalearning.com) | | | |