**TNHA Curriculum Planning Document** Subject: Computer Science Year: 10

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| **Timescale** | **Autumn** | | | **Spring** | | | **Summer** | | |
| **Prior Learning (from KS2/3)** | None | None | None | None | None | None | None | None | None |
| **Topic/ Unit title** | Algorithms 1 – Top down Design, Flowcharts and Pseudocode | Algorithms 2 – Searching and Sorting | Programming 1 – Input/Output, Operators, Variables, Data types, String Operations | Programming 2 – Subroutines, Sequence, Selection, Iteration, Importing modules. | Programming 3 - Scope, Data Structures, | Programming 4 – Files, Validation Techniques, Errors and Testing. | Controlled Assessment | Controlled Assessment | Controlled Assessment |
| **SMSC/Cultural Capital/Character/FBV- outline specific areas that are covered in this unit** | Consider their place in a technical world, how they are better than computers in most regards but also understand their own limitations.  How problem solving through algorithmic design can be related to non computing related problems.  Group work. | Consider their place in a technical world, how they are better than computers in most regards but also understand their own limitations.  How problem solving through algorithmic design can be related to non computing related problems.  Group work. | Must reflect upon own learning to create imaginative programming solutions and also have links to actual programming jobs | Must reflect upon own learning to create imaginative programming solutions and also have links to actual programming jobs | Must reflect upon own learning to create imaginative programming solutions and also have links to actual programming jobs | Must reflect upon own learning to create imaginative programming solutions and also have links to actual programming jobs | Must reflect upon own learning to create imaginative programming solutions and also have links to actual programming jobs | Must reflect upon own learning to create imaginative programming solutions and also have links to actual programming jobs | Must reflect upon own learning to create imaginative programming solutions and also have links to actual programming jobs |
| **Assessment Opportunities** | Each Topic is assessed by an end of topic test.  During the year students will be assessed on their programming skills also.  Limited scope for assessment for controlled assessment due to controlled nature of assessment. | | | | | | | | |
| **Links to other units in KS3/4.** | Y10 – Programming (all) | Y10 – Programming (all) | Y10 – Algorithms 1 | Y10 – Algorithms (all)  Y10 – Programming 1 | Y10 – Algorithms (all)  Y10 – Programming 1-2 | Y10 – Algorithms (all)  Y10 – Programming 1-3 | Y10 – Algorithms (all)  Y10 – Programming (all) | Y10 – Algorithms (all)  Y10 – Programming (all) | Y10 – Algorithms (all)  Y10 – Programming (all) |

**TNHA Curriculum Planning Document** Subject: Computer Science Year: 11

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| **Timescale** | **Autumn** | | | **Spring** | | | **Summer** | | |
| **Prior Learning (from KS2/3)** | None | None | None | None | None | None | None | None | None |
| **Topic/ Unit title** | Y10 Algorithms and Programming Theory recap | Data Representation | Computer Systems | Networks | Cyber Security | Consequences of Technology | Revision of all topics and past papers. |  |  |
| **SMSC/Cultural Capital/Character/FBV- outline specific areas that are covered in this unit** | Must reflect upon own learning to create imaginative algorithmic solutions and also have links to actual programming jobs | Consider their place in a technical world, how they are better than computers in most regards but also understand their own limitations. | Consider their place in a technical world, how they are better than computers in most regards but also understand their own limitations. | Ethical and legal use of technology.  The increasing use of technology at the expense of human labour and freedoms. | Ethical and legal use of technology. | Ethical and legal use of technology.  The increasing use of technology at the expense of human labour and freedoms.  Ethical use of technology including conservation and the effect on less developed countries. |  |  |  |
| **Assessment Opportunities** | Each Topic is assessed by an end of topic test. | | | | | | | | |
| **Links to other units in KS3/4.** | Y10 – Algorithms (all) and Programming theory (no programming) | None | Data Representation | None | None | Y11 – Computer Systems, Networks, Cyber Security | Y10 – All  Y11 - All |  |  |