## Overview of the curriculum

| Year | Unit of work | Rational | Key skills |
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| KS4 | Careers in IT | Visitor from outside of school to visit to discuss careers in the curriculum.<br><br>This can be taught at any point within the curriculum when speaker is confirmed. | • Understand how skills IT are used in the real world. |
| | LO1: Understand the tools and techniques that can be used to initiate and plan solutions | This unit of work looks at the phases of the project lifecycle. This is ultimately, what the course is about so it needs to be taught at the start of the course, therefore it is important that pupils have a sound knowledge on how they work.<br><br>Pupils needs to know the different phases, how they interact, the inputs and outputs to each phase, any considerations that need taken before the project begins and the planning tools that are available. | 1.1 Phases of the project life cycle and the tasks carried out in each phase<br><br>1.2 Interaction and iteration between the phases of the project life cycle<br><br>1.3 The inputs and outputs of each stage of the project life cycle<br><br>1.4 Initial project considerations<br><br>1.5 Planning tools and the software types used to develop project plans |
| | LO3: Understand how data and information can be collected, stored and used | In this unit of work, pupils will understand the theory as to know data is stored and how it becomes information. It is key that pupils understand that data is collected, stored, used and accessed in a variety of different | 3.1 Data types<br><br>3.2 Information<br><br>3.3 Methods used to collect and store data and information, and the appropriateness of the use of these in a given context |

| | | ways. Pupils will also understand the benefits and drawbacks of data and its uses. | 3.4 Storage and the appropriateness of the use of these in context |
| | | | 3.5 Use of data in a given context including Big Data |
| | LO4: Understand the factors to be considered when collecting and processing data and storing data/information | This unit follows directly on from LO3, as pupils will understand that data collected is important and must be stored correctly. Pupils will learn the different factors that need to be considered when storing data such as IT threats (malware, hacking etc.) vulnerabilities that may lead to cyber security attacks, the impact that these attacks have, how they can be prevented, current legislation that needs to be followed and how important validity, reliability and bias are when collecting and using information. | 4.1 Types of threats |
| | | | 4.2 The vulnerabilities –which can be exploited in a cyber-security attack |
| | | | 4.3 The impacts of a cyber-security attack |
| | | | 4.4 Prevention Measures |
| | | | 4.5 Current legislation, its implications and applications |
| | | | 4.6 The importance of validity, reliability and bias when collecting and using data and information |
| | LO5: To be able to import and manipulate data to develop a solution to meet an identified need | This is another practical unit that follows on from L03 and 4. It relates to how data can be manipulated using skills within a spreadsheet and database. It will apply the theory they have learnt and apply it practically based on a given scenario ready for R013. | 5.1 Learners should be taught how to create, edit and delete data using appropriate software tools and techniques |
| | LO6: Understand the different methods of processing data and presenting information. | This unit follows directly on from LO5, as pupils need to know about different software types (spreadsheets, databases, word processors, desktop publishing and | 6.1 Selection and justification of the appropriate tools and techniques and formats to process |

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| | | presentation software) and their uses so that they can justify their choices for using piece of software to complete a given task. They must know the advantages and disadvantages of each to justify their choices. | data to meet the defined objectives in a given context<br><br>6.2 Purpose and suitability of presenting methods<br><br>6.3 The resources required for presenting information and data and the appropriateness of the use of these in context |
| | RO12 practice papers | Practice questions will be used throughout the course and at the end of each unit (end of unit tests) and practice, papers will be given to complete to help understand how the exam will be sat. | • LO1, L03. LO4 and LO6 |
| | R012 mock – December (year 11) | Practice formally for their actual exam in January. | • LO1, L03. LO4 and LO6 |
| | R012 exam – January (year 11) | All pupils will sit their actual exam. | • LO1, L03. LO4 and LO6 |
| | LO2: To be able to initiate and plan a solution to meet an identified need | This unit is taught here, as pupils will have a sound knowledge of the theory that is required to understand how to practically put the skills into practice.<br><br>Pupils will have already covered SMART for in LO1 so applying this knowledge to a scenario will be applied easier for example. This unit puts the theory learnt in LO1 into practice. | 2.1 Learners must be taught how to initiate a project by analysing the requirements to a given context<br><br>2.2 Learners should be taught how to mitigate risks through the planning process<br><br>2.3 Learners should be taught how to use planning documentation |

| | | This unit is a practical unit ready for R013. | 2.4 Learners should be taught how to undertake iterative testing |
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| | LO7: To be able to select and present information in the development of the solution to meet an identified need | This unit follows directly on from LO6 and will allow pupils to practically present information using appropriate methods. Pupils will learn how to present information to meet the need of a client. This unit teaches practical skills that will be needed to meet specific needs for example enhancing text. | 7.1 How to select and extract data for an identified need<br><br>7.2 Learners should be taught how to present information using appropriate software tools and techniques |
| | LO8: To be able to iteratively review and evaluate the development of the solution | Reviews will have been discussed throughout the unit of work when referring to the project lifecycle however; this unit is left to the end as reviews take place at the end of different sections or the end of the project. By this point, pupils will have completed all sections and need to understand that reviewing their work is important, as it is in the project lifecycle. This is a practical unit to ensure that they know how to write a review ready for R013. | 8.1 Learners should be taught how to carry out and document an iterative review i.e. Phase review |
| | RO13 practice assignment | A practice assignment will be used throughout L02, 5, 7 and 8 to produce documentation to allow pupils to present the skills that are needed for R013. | • LO2, L05. LO7 and LO8 |
| | RO13 assignment - January | January of year 11 once R012 exam has been sat, R013 will be given and pupils will be | • LO2, L05. LO7 and LO8 |

| | | given the set assignment, which is to be completed within exam conditions. | |
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| | R012 resits | March pupils will be given their results and those who will resit will sit the exam in June. Revision of RO12 will take place after R013 is completed. | • LO1, L03. LO4 and LO6 |