# KS4 CNAT IT Curriculum Overview

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| | **Links to KS3** | This qualification builds upon the Introducing Spreadsheet and Advanced Spreadsheets units studied at KS3. Pupils will apply this to their R060 NEA.<br>Furthermore, KS3 units such as E-safety, Cyber Security and Encryption are revisited and further explored through the R050 exam theory. Likewise Flow Charts which were previously studied in the Algorithms and the Ethics of Computing units are one of the key design tools pupils could apply to their NEA's and also be expected to explain in their exam.<br>Legislation relatied to the use of digital technology and storage of data along with methods of internet connectiivity taught in the Networking and the Internet unit at KS3 are relevant to the exam for this course too. | | | | | |
| **Intent** | **Statement of Intent** | The Level 1/2 Cambridge National in IT qualification aims to develop knowledge, understanding and practical skills that are used in the IT sector. It consists of 3 mandatory units which are R050: IT in the Digital World - which is the only exam and must be taken at the end of the 2 years, R060: Data Manipulation Using Spreadsheets - an NEA completed from an OCR set assignment and R070: Using Augmented Reality to Present Information - a second NEA, again from an OCR set assignment. | | | | | |
| | **Timeline** | **Term 1 - 7 Weeks** | **Term 2 - 7 Weeks** | **Term 3 - 6 Weeks** | **Term 4 - 6 Weeks** | **Term 5 - 6 Weeks** | **Term 6 - 7 Weeks** |
| **Implementation (Year 10)** | **Year Overview** | This year students will be introduced to the new course starting with gaining an understanding of how design tools and human computer interfaces should be at the forefront of creating digital products. They will then move onto expanding their spreadsheet skills from KS3 in order to apply this knowledge to creating spreadsheet model to manipulate data following a set assignment brief. In the summer term, after completing their R060 NEA students will be introduced to using Augmented Reality development tools to prepare for their second NEA which will be undertaken from the start of year 11. | | | | | |
| | **SOW** | **R050 TA1 Design Tools & TA2 Human Compuer Interface in Everyday Life**<br><br>**R060 TA1 Planning and Designing the Spreadsheet Solution** | **R060 TA2 Creating the Spreadsheet Solution** | **R060 TA1 & TA2 Data Manipulation Using Spreadsheets NEA** | **R060 TA2, TA3 & TA4 Data Manipulation Using Spreadsheets NEA contiunation**<br><br>**R060 TA3 Test the User Interface and the Technical Aspects of the Spreadsheet Solution & TA4 Client Requirements** | **R060 NEA completion**<br><br>**R050 TA3 Data and Testing** | **R070 Using Augmented Reality to Present Information TA1 Augmented Reality & TA2 Designing an AR Model Prototype**<br><br>**R070 AR Model Prototype Sample Set Assignment Task 1** |
| | **Assessment Type & Unit Focus** | R050 TA1 & TA2 Exam theory to start the course and deliver some fundamental content that will be needed for the NEA later in the year.<br><br>R060 TA1 Preparation for the first NEA on spreadsheet modelling. Ongoing assessments through Boost Learning knowledge quizzes and written worksheets. | R060 TA2 This series of lessons will cover the range of spreadsheet modelling skills pupils will be required to know and apply to their NEA next term. Pupils will develop their competency by completing practical spreadsheet activities alongside learning the taught content to know when and how to use these techniques. Spreadsheet modelling tasks and self marking quizzes will be used for assessment. | This term pupils will start work on the first of their NEA's - R060 Data Manipulation Using Spreadsheets. They will complete their Task 1 planning activities along with Task 2 creating their spreadsheet solution for the OCR set assignment. | Pupils will complete the creation of their R060 spreadsheet solution.<br><br>R060 TA3 & TA4 taught content will break up the term, before pupils undertake the final Task 3 testing and Task 4 evaluation activities of their R060 NEA. | The first 2 weeks of this term will see students make any final adaptations to their R060 NEA before we swtich back to exam theory teaching for the rest of this term.<br><br>R050 TA3 Exam theory content will be the focus of these remaining lessons with Boost Learning knowlege quizzes and written worksheets for assessment. | This final term will see the introduction of teaching content for R070: Using Augmented Reality to Present Information. In year 11 pupils will undertake their second NEA early in the year so in this final term of year 10 they will begin to have an awareness of what this will cover.<br><br>TA1 & TA2 AR and Designing an AR Model Prototype content will be delivered along with pupils using the Sample Set Assignment to practice designing an AR Model Prototype for assessment. |

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## Implementation (Year 11)

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| **Year Overview** | This year students will continue developing their knowledge of Augmented Reality started at the end of year 10. They will then applying their skills to create an AR app prototype which will form their R070 NEA following an assignment brief produced by OCR. Upon completion of their NEA they will switch to exam theory focusing on Cyber Security and Legislation, Digital Communications and Internet of Everything ready to sit their exam at the end of the year. | | | | | |
| **SOW** | **R070 TA3 Creating an AR model prototype & TA4 Testing and Reviewing**<br><br>**R070 AR Model Prototype Sample Set Assignment Task 2 and Task 3** | **R070 TA1, TA2 & TA3 Using Augmented Reality to Present Information NEA** | **R070 TA4 Using Augmented Reality to Present Information NEA**<br><br>**R050 TA4 Cyber Security and Legislation** | **R050 TA5 Digital Communications & TA6 Internet of Everything (IoE)** | **R050 IT in the Digital World Exam Revision and Preparation** | |
| **Assessment Type & Unit Focus** | R070 TA3 Creating an AR Model Prototype teaching content will be delivered along with pupils developing skills in using AR Development Tools which will be new to them.<br><br>In order to practice these skills pupils will undertake Task 2 of the Sample Set Assignment. They will use either the XR+ or BlippAR application to develop this in preparation for undertaking their real NEA.<br><br>The final lessons this term will cover the R070 TA4 Testing and Reviewing teaching content and pupils will apply this knowledge through completion Task 3 of the | This term pupils will start work on the second of their NEA's - R070 Using Augmented Reality to Present Information. They will complete their Task 1 planning activities along with the Task 2 creating their AR model prototype for the live OCR set assignment. | This term pupils will complete their NEA by undertaking the final Task 3 Testing and Reviewing.<br><br>Upon completion of the NEA teaching will switch back to R050 Exam theory. Focus will be on TA4 Cyber Security and Legislation and link to content learnt at KS3.<br><br>Worksheets and Boost Learning quizzes will be used for assessment. | This term the final R050 Exam teaching content will be delivered and assessed through completion of worksheets and Boost Learing quizzes.<br><br>TA5 Digital Communications covers content including types of digital communication, software, digital devices and methods of connectivity.<br><br>TA6 Internet of Everyting (IoE) considers how current technology can be applied to a wide range of industries to automate and monitor processes as well as consider security risks, advantages and disadvantages. | This term will focus on exam technique and revision, partircularly revisiting the content from TA1 Design Tools, TA2 Human Computer Interface (HCI) in Everyday Life & TA3 Data and Testing which was initially delivered in Year 10.<br><br>A mock exam and sample exam paper questions will be used for assessment. | |
| **Topic Texts** | Cambridge National in IT (Second Edition) J836 by Mo Everett, Richard Howe & Sonia Stuart;<br>My Revision Notes: Cambridge National in IT (Second Edition) by Sonia Stuart;<br>Cambridge National in IT Student Book by David Atkinson-Beaumont, Alan Jarvis & Sarah Matthews;<br>Cambridge National in IT Revision Guide & Workbook by Sarah Matthews. | | | | | |

## Impact

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| **Year Tracking** | Y11 RP1: T1, W5 | Y10 RP1: T2, W1<br>Y11 RP2: T2, W5 | | Y10 RP2: T4, W5<br>Y11 RP3: T4, W5 | Y11 RP4: T5, W3 | |
| **Literacy and Numeracy links** | Literacy tasks are embedded throughout the course. Key terms are regularly defined and referred to with self marking assessment tasks often involving reading passages of text and filling in the missing words. The R050 NEA being a spreadsheet model has significant links to numeracy through the manipulation and analysis of numerical data. Formuae and functions must be applied and used accurately to demonstrate where to use appropriate calculations in the spreadsheet. Both planning design tasks and written evaluations of their NEA work provides opportunities for pieces of extended writing. | | | | | |
| **How It Is Used/Skills Set Developed/Outcomes** | Students will be able to create and manipulate data in spreadsheets which are used in a wide range of industries. They will present data for analysis through use of charts and pivot tables.<br>Their planning techniques will be valuable skills that can be used across their other subjects and they will test and evaluate their final products to review and reflect on their performance, again useful skills for other subject areas. | | | | | |
| **Links to Further Education** | Completion of the CNAT in IT can be used as a pathway to A Level Computer Science (if studied alongside GCSE Computer Science), Level 3 Cambridge Technicals in Information Technology or Digital Media, Level 3 T Levels in Digital Production, Design and Development, Digital Support Services or Digital Business Services or Digital Pathway Apprenticeships eg IT, Digital and Technology, Cyber Security or Data Analyst. | | | | | |
| **Careers in the Curriculum** | Throughout the course, we update our careers board using genuine examples of occupations related to the field of IT. Links will be made during theory lessons to the job roles that the skills/content being learnt applies to such as careers in Cyber Security, Data Analysis, Augmented Reality App Development etc. | | | | | |