Computing/IT
Year 7 Curriculum Map

Woolwich Polytechnic
School for Boys

Unit One	Unit Two	Unit Three
Topic: Using School System, E-Safety & Email **Key Learning:** Logging in and choosing appropriate passwords Save work on Network and One Drive Creating Files and Folders Staying Safe Online Cyberbullying Dangers affecting computers Email - Send, receive, forward, emails, add attachments, use CC, BCC Presenting Information using Power Point **Assessment: End of Unit Test on MS Forms**	**Topic: Scratch Programming** **Key Learning:** Understand how flow diagrams help with the planning of programs. Draw repeating patterns Control the sprite by altering the co-ordinates and use variables in a simple game. Create flow diagrams to help plan your script and use broadcast messages in your code. Create and evaluate a game **Assessment: End of Unit Test on MS Forms**	**Topic: Introduction to Python** **Key Learning:** Create simple code including input and print scripts Create variables and declare the data types for variables. Use operators to effectively create programs **Assessment: End of Unit Test on MS Forms**

Unit Four	Unit Five	Unit Six
Topic: Computational Thinking **Key Learning:** Break down a large problem into small, simple instructions Spot patterns of repetition in sets of instructions Use abstraction to remove specific detail Create flow charts Write algorithms using pseudocode **Assessment: End of Unit Written Test**	**Topic: Spreadsheets** **Key Learning:** Input data into a spreadsheet and create basic formulae. Formatting a spreadsheet Use a range of functions Sort and Filter using comparator operators Create graphs/charts Use absolute and relative cells **Assessment: End of Unit Test on MS Forms**	**Topic: AI and Machine Learning** **Key Learning:** What is AI Machine Learning Ethics of AI Image Recognition Turing Tests and chatbots Rate my Review **Assessment:** End of Year Exam on MS Forms

Computing/IT
Year 8 Curriculum Map

Woolwich Polytechnic
School for Boys

Unit One	Unit Two	Unit Three
Topic: Computer Crime & Cyber Security, Ethical and Legal Issues **Key Learning:** Email Scams Hacking Protecting Personal Data Copyright Protection Health and Safety Explain the laws that regulate the use of computers and data **Assessment: End of Unit Test on MS Forms**	**Topic: Database** **Key Learning:** Describe a database and why people use databases Create and use a database. Define and identify primary key fields and foreign key Create queries Explain and create a relational database **Assessment: End of Unit Test on MS Forms**	**Topic: Introduction to Python** **Key Learning:** Create simple code using the input and print scripts Create variables and declare the data types Use operators to effectively create programs Use If statements to make a decision. Use random function Use For and While loops Create simple games using Python. **Assessment: End of Unit Test on MS Forms**

Unit Four	Unit Five	Unit Six
Topic: Spreadsheets **Key Learning:** If Statements and Nested If VLookup Count, CountA, CountIf SUM, SUMIF, AVERAGEIF Goal Seek **Assessment: End of Unit Test**	**Topic: Data Representation** **Key Learning:** Convert 8 bit binary numbers to and from denary Add together binary numbers and convert hexadecimal numbers to binary and denary Recap binary, hex and addition with binary **Assessment: End of Unit Test on MS Forms**	**Topic: Networks** **Key Learning:** Define a computer network Identify the hardware involved in a network Understand how computers communicate over networks Understand how HTML works and the most common file types used over the Internet Research and give a presentation about network security and common policies **Assessment: End of Year Exam on MS Forms**

Computing/IT
Year 9 Curriculum Map

Woolwich Polytechnic
School for Boys

Unit One	Unit Two	Unit Three
Topic: Introduction to Python and using Algorithms **Key Learning:** Create algorithms and simple Python programs. Create Python programs combining integers and strings Use if statements in your programming. Use loops in your programming. Create lists in Python Sort data in lists. **Assessment:** End of Unit Assessment	**Topic: Database Project** **Key Learning:** Create a Relational Database linking tables using key fields and relationships Create select queries using single tables and multiple tables/multiple criteria, parameter and calculated queries Create reports Create data entry forms, enhancing layout of form and navigation controls Create a switchboard **Assessment:** End of Unit Assessment	**Topic: Von Newmans Architecture** **Key Learning:** Hardware CPU Fetch-Execute Cycle Performance of the CPU Main Memory Secondary Storage Embedded Systems **Assessment:** End of Unit Assessment

Unit Four	Unit Five	Unit Six
Topic: Spreadsheet Project **Key Learning:** Create and format a spreadsheet including buttons, check box, spinners, scroll bar Use data formatting and suitable validation rules Use appropriate formulae and functions to meet set outcomes Arranging, reducing and outputting data to help make decisions Modify data and formulae to model 'what if' scenarios Test spreadsheet **Assessment:** End of Unit Assessment	**Topic:** Creating a Logo using Graphics Software (GIMP) **Key Learning:** Planning and designing an image Creating and modifying an image using appropriate tools and techniques Storing the image appropriately and outputting the final image in a format that is fit for purpose **Assessment:** End of Unit Assessment	**Topic: Logic Gates, Truth Tables, Image & Sound** **Key Learning:** Draw and use logic gates and truth tables. Understand how computers store text and characters Understand how computers store bitmap images Understand how text and images are saved using binary Understand how computers store sound files. Understand how sound and instructions are saved using binary Understand how computers understand instructions. **Assessment:** End of Unit Assessment

Computer Science
Year 10 Curriculum Map

Woolwich Polytechnic
School for Boys

Unit One	Unit Two	Unit Three
Topic: System Architecture **Key Learning:** The CPU Functions of the CPU Memory Storage Programming workbook **Baseline test**	**Topic: Networks** **Key Learning:** The internet LAN WAN Client Server vs Peer to Peer Protocols and layers Programming workbook **Unit assessment**	**Topic: System Software** **Key Learning:** Threats to computer systems and networks Identify and prevent vulnerabilities. Operating Systems Utility software Programming workbook **Unit assessment**
Unit Four	**Unit Five**	**Unit Six**
Topic: Algorithms **Key Learning:** Computational Thinking Searching Sorting Flowcharts Pseudo code Analyse algorithms Programming workbook **Unit assessment**	**Topic: Programming** **Key Learning:** Programming concepts Sequence and selection Iteration Arrays Procedures and functions Records and Files Programming workbook **Unit assessment**	**Topic: Data Representation** **Key Learning:** Units Binary arithmetic Characters Images Sound Compression Revision PPE Programming workbook **Unit assessment**

Computer Science
Year 11 Curriculum Map

Woolwich Polytechnic
School for Boys

Unit One	Unit Two	Unit Three
Topic: Ethics and legislation **Key Learning:** Ethical and cultural issues Computers in the modern World Legislation and privacy Programming workbook **Assessment: End of Unit Test**	**Topic: Logic diagrams and languages** **Key Learning:** Truth tables Defensive design Errors and testing Translators and facilitators of languages Programming workbook **Assessment: End of Unit Test**	**Topic:** Exam Practice & Revision
Unit Four	**Unit Five**	**Unit Six**
Topic: Exam Practice & Revision	**Topic:** Exam Practice & Revision	