|  |  |
| --- | --- |
| **Year 10 Term 2****Cambridge Nationals in IT** | Our mission is to stimulate and challenge our students to excel and provide a desire for lifelong learning and pursue careers in the world of Business, Computing, and ICT. |
| **Enquiry Questions: Is facial recognition or a fingerprint come under a data type? Is it a cybercrime to experiment hacking for educational purposes? How can I practice hacking to be hired by a company legally?** |
| **R050: IT in the Digital World**In this unit students will learn the theoretical knowledge and understanding to apply design tools for applications, principles of human computer interfaces and the use of data and testing in different contexts when creating IT solutions or products. You will understand the uses of Internet of Everything and the application of this in everyday life, cyber-security and legislations related to the use of IT systems, and the different types of digital communications software, devices, and distribution channels. |
| **Knowledge**Students will know about… | **Application/Skills**Students will be able to… | **Vocabulary** | **Home Learning** | **Assessment** | **Extra Resources****Extended Reading** | **Cultural Capital** |
| **R050: Topic Area 3: Data and testing**Students will learn to recognise what is data and its importance. They will justify suitable data types for various contexts as well as importance of validation and verification of using data. Students will need to implement testing methods and understand the importance of data entry methods to reduce human error.**R050: Topic Area 4: Cyber Security & Legislation**In this part of the unit, students will identify the latest computer threats that are used in cyber attacks and know the prevention strategies to protect computers. Students will discuss and research into the impact  | * Assess the suitability and justify the use of data types applied to a given context
* Practice validation methods using spreadsheets and websites
* Know the purpose of each data collection method
* Advantages and disadvantages of the data collection methods
* Assess the suitability and justify the use of the data collection methods applied to a given context
* Advantages and disadvantages of testing
* Discuss and research on how each type of social engineering can be used to gather data and information • How to mitigate against the threats
* Assess computer crimes and how it breaks certain legislations
 | * Alphanumeric
* Boolean
* Currency
* Decimal
* Integer
* Real
* Data type, Format, Input mask, Length check
* Lookup
* Presence and Range check
* Double entry
* Primary Hard Drive
* Network Drive
* Portable external Hard Drive Disc (HDD),Solid-State Drive (SSD),Network-attached storage (NAS) device, USB Flash Drives, Wireless Drives
* Black, White, Grey Hat Testing
* Computer Misuse Act
* Copyright, Designs and Patents Act
* Data Protection Act
* Freedom of Information Act
* Health & Safety at Work Act
* Adware, Botnet, Ransomware, Spyware, Trojan Horse, Virus, Worm
* Encryption, Firewalls
* Baiting, Phishing, Pretexting, Quid Pro Quo, Scareware, Shoulder Surfing
 | High quality Homework set on Google Classrooms Teach-ICT.comHodder Education – Revision Book Cambridge Nationals in ITSpreadsheet practice using Google Sheets | Milestone Assessments within Units of workFormal End of unit assessments | [Teach-ICT.com](https://teach-ict.com/2016/GCSE_Computing/OCR_J277/OCR_J277_home.html)Hodder Education – Revision Book Cambridge Nationals in IT | The National Science Museum (free events)<https://www.sciencemuseum.org.uk/>The Royal Institute of Science (free events)<https://www.rigb.org/families/family-fun-days>**National Museum of Computing, Bletchley Park (Near Milton Keynes)** <http://www.tnmoc.org/> Centre for Computing History, Cambridge<http://www.computinghistory.org.uk/> |