|  |  |  |
| --- | --- | --- |
| **Unit 1: Online Safety -** | | **Y6 Skills:** |
| 1 | Describing issues online that give us negative feelings and know ways to get help. | **Online Safety-:**  **Key knowledge:**   * To know that a digital footprint means the information that exists on the internet as a result of a person’s online activity. * To know what steps are required to capture bullying content as evidence. * To understand that it is important to manage personal passwords effectively. * To understand what it means to have a positive online reputation. * To know some common online scams.   **Key vocabulary:**  anonymity, antivirus, biometrics, block and report, consent, copy, cigital footprint, digital personality, financial information, hacking, inappropriate, malware, online bullying, online reputation, password, paste, personal information, personality, phishing, privacy settings, private, reliable source, report, reputation, respect, scammers, screengrab, secure, settings, software updates, two factor authentication, URL, username  **Computing Systems and Networks-:**  **Key knowledge:**   * To understand the importance of having a secure password and what “brute force hacking” is. * To know that the first computers were created at Bletchley Park to crack the Enigma code to help the war effort in World War 2. * To know about some of the historical figures that contributed to technological advances in computing. * To understand what techniques are required to create a presentation using appropriate software.   **Key vocabulary:**  acrostic code, brute force hacking, caesar cipher, chip and pin system, cipher, code, combination, contribute, convince, date shift cipher, discovery,  hero, invention, Nth Letter Cipher, password, Pig Latin, Pigpen cipher, present, scrambled, secret, secure, technological advancement, trial and  error |
| 2 | Thinking about the impact and consequences of sharing online. |
| 3 | Knowing how to create a positive online reputation. |
| 4 | Being able to describe how to capture bullying content as evidence. |
| 5 | Managing personal passwords effectively. |
| 6 | Being aware of strategies to help be protected online. |
|  | Adaptations: |
|  | |
| **Unit 2: Computing Systems and Networks: Bletchley Park-** | |
| 1 | Understanding that there are lots of different types of secret codes. |
| 2 | Understanding the importance of having a secure password. |
| 3 | Understanding the importance of Bletchley Park to the World War II war effort. |
| 4 | Understanding about some of the historical figures that contributed to technological advances in computing. |
| 5 | Researching and presenting information about historical figures in computing. |
|  | Adaptations: |

|  |  |  |
| --- | --- | --- |
| **Unit 3: Programming: Intro to Python-** | | Logo  Description automatically generated**Y6 Skills:** |
| 1 | Tinkering with a new piece of software. | **Programming-:**  **Key knowledge:**   * To know that there are text-based programming languages such as Logo and Python. * To know that nested loops are loops inside of loops. * To understand the use of random numbers and remix Python code.   **Key vocabulary:**  algorithm, code, command, design, import, indentation, input, instructions, loop, output, patterns, random, remix, repeat, shape  **Data Handling-:**  **Key knowledge:**   * To know that data contained within barcodes and QR codes can be used by computers. * To know that infrared waves are a way of transmitting data. * To know that Radio Frequency Identification (RFID) is a more private way of transmitting data. * To know that data is often encrypted so that even if it is stolen it is not useful to the thief.   **Key vocabulary:**  algorithms, barcode, binary, Boolean, brand, chips, commuter, contactless, data, encrypted, infrared, MagicBand, privacy, proximity, QR code, QR  scanner, radio waves, RFID, signal, systems/data analyst, transmission, wireless |
| 2 | Understanding nested loops. |
| 3 | Understanding basic Python commands. |
| 4 | Using loops when programming. |
| 5 | Understanding the use of random numbers. |
|  | Adaptations: |
|  | |
| **Unit 4: Data Handling: Big Data 1 -** | |
| 1 | Identifying how barcodes and QR codes work. |
| 2 | Knowing how infrared waves transmit data. |
| 3 | Recognising how RFID is used. |
| 4 | Inputting and analysing real-world data. |
| 5 | Analysing and evaluating data. |
|  | Adaptations: |

|  |  |
| --- | --- |
| **Cross-Curriculum Links:** | |
| Unit 1 | RSE and PSHE |
| Unit 2 | **History –** study an aspect or theme in British history.  **Maths –** solve number and practical problems. Read, write, order and compare numbers up to 10 000 000.  **RSE –** know the rules and principles for keeping safe online and how to report them. How to critically consider online friendships and an awareness of the risks associated with strangers online.  **English: Writing – Composition.** Identifying the audience and purpose. Noting and developing initial ideas. Using further organisational and presentational devices to structure text. |
| Unit 3 | **Maths** – compare and classify geometric shapes based on their properties and sizes. Describe positions on the full coordinate grid.  **Art** – improve their mastery of art and design techniques, including drawing, painting and sculpture and know about great artists, architects and designers in history |
| Unit 4 | **Science –** recognise that light appears to travel in straight lines  **RSE: Online Relationships** – the rules and principles for keeping safe online and how to report. How information and data is shared and used online.  **Maths:** interpret and construct pie charts and line graphs and use these to solve problems. Complete, read and interpret information in tables. |