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| Okehampton College Curriculum Overview: KS3 Computer Science 2022 -2023 | | | Updated June 2022 by LJD | |
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| Half Term | Year 7 | Year 8 | | Year 9 |
| 1 | **Introduction**   * Log in and file management * Literacy assessments * Cat4 testing   **History of computer Science**   * Research skills * Presentation formatting | **Esafety:**   * Healthy and unhealthy relationship behaviours online * Safeguarding first   **Programming IV: Python**   * Writing algorithms * Data types * String functions * Selection * Iteration * Subroutines   **Website design**   * Understanding HTML * Understanding CSS | | **Esafety:**   * Healthy and unhealthy relationship behaviours online * Safeguarding first   **Impacts of digital technology**   * Ethical and Cultural issues * Environmental issues * Legislation and privacy |
| 2 | **eSafety**   * Social networking * Keeping your data safe * Using email * Searching the web * Plagiarism rules   **PowerPoint**   * Creating slides – The Master Slide * Creating a theme that keeps your slides consistent – who is your target audience? * Adding images |
| 3 | **Inside the computer**   * Hardware / software * Computer components * The CPU * Primary / secondary storage devices * Binary numbers - Binary to denary | **Spreadsheets II**   * Recap on business modelling * Using the IF function * Using lookup tables * Validation | | **App development - for iphone, Android, Windows or Blackberry**   * Introduction to Apps * Home Screen and navigation * Adding files, links and images * Using map functions * Programming with Blockly * Publishing your App |
| 4 | **Programming II: Pivot**   * Storyboarding * Character design * Development from storyboard to animation * Responding to user feedback | **Data representation**   * Bits and Bytes * Binary to denary recap * Denary to binary * ASCIll * Hexadecimal | | **Programming: developing Python**   * Loops * Lists * Procedures * Functions |
| 5 | **Spreadsheets I**   * Creating a computer model * Using formulae * Conditional formatting * Charts | **Business – 4 Ps**   * Product * Place * Promotion * Price | | **Control systems with Flowol**   * Flowcharts * Sequencing * Sensors * Subroutines * Actuators * Variables   **Graphic design Blender**   * Intro to 3D design * Navigating the Blender interface * The Viewport and viewing 3D space * Transforming objects * Translating objects * The various viewport modes * Building scenes * Colours and Textures * Box Modelling * Extrusion * Loop Cuts * Bevels and Chamfers * Animation and armatures * 3D printing (control systems and 3D models for prints |
| 6 | **Programming I: Scratch**   * Movement & sprite behaviour * Lives & scoring * Adding a new level * Adding sounds   **Programming III: Kodu**   * Creating landscapes * Navigation and Pathing * Clones vs Creatables * Pages and selection   **E safety Booster**  Social media and how to get help | **Systems Architecture**   * Architecture of the CPU * CPU performance * Memory * Secondary Storage * Logic Gates   **BBC Microbit**   * Intro to physical computing * Sensors and what they can tell us * Random number generation * Wearables and ubiquitous computing * Embedded systems   **E safety Booster**  Social media and how to get help | |