**KS3 IT Topics**

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|  |  | **Autumn A** | **Autumn B** | **Spring A**  *s* | **Spring B** | **Summer A** | **Summer B** |
| **Year 7** | TOPIC | Intro to Computing & Programming  Key knowledge:  Using school systems, ICT skills, presenting information, ESafety  Skill Focus - Using school systems effectively.  Basic IT skills - presenting information | Introduction to Programming  Key knowledge:  Programming fundamentals in Scratch; inputs, outputs, sequence & selection.  Skill Focus - Programming fundamental | Office Skills and File Management  Project  Key knowledge:  IT skills for life, use of audience and purpose, planning, using spreadsheets and Office effectively.  Skill Focus - IT Skills for life, Audience and Purpose. Planning | Web Design - Introduction to HTML  Key knowledge:  Web page design, HTML, page layout and graphics  Skill Focus - Web design, page layout/graphic | Computer Hardware  Key knowledge:  Computer components; inside my PC, how hardware works, processing data.  Presenting information – Office skills, Research skills | Arcade Game Maker  Key knowledge:  Project planning, developing games  Skill Focus - Planning skills |
| ASSESSMENT | Formative – All About Me  Formative – E- Safety  Diagnostic - Base Line Assessment | Formative – Chat Bot  Formative – Calculator  Diagnostic – Unit Scratch Assessment | Formative – Spreadsheet Task  Formative - Festival Group Presentations  Diagnostic – Office Assessment | Formative -  Page design (visualisation diagram)  Formative – Final Website  Diagnostic – HTML Quiz | Formative – Hardware Presentation  Formative - Computer Components Advice  Diagnostic - Computer Hardware Assessment | Formative – Project planning  Formative -  Evaluation  Diagnostic – Final Game |
| **Year 8** | TOPIC | My Digital World & Programming with Micro Bits  Key knowledge: Safety, how IT has changed out world, how does the internet work, internet & the Law.  Skill Focus - Research skills | Binary, Bits and Bobs inc computational thinking  Key knowledge: Binary/ denary conversions & addition, characters/image and sound. Computational thinking.  Skill Focus - Application of maths | Introduction to Python  Key knowledge: Use of code, use of Python, programming skills Input and outputs. Sequence and selection. Iteration  Skill Focus - Programming | HTML & CSS  Key knowledge: Page design, website code, web design, graphics.  Skill Focus - Web design. Graphics | Platform Game Maker  (Scratch Game Design using Pre-production techniques)  Key knowledge: Scratch Game Design using Pre-production techniques  Skill Focus - Programming & Evaluation | Back to the Future  Key knowledge: Chronological developments, multimedia.  Skill Focus - IT Skills, multimedia, research |
| ASSESSMENT | Formative – Copyright Booklet  Formative – E-Safety Poster  Diagnostic –End of unit Quiz | Formative – Binary  Formative – Representing Images  Diagnostic - Binary Bits and Bobs end of unit assessment | Formative – Python Code 1  Formative – Python Code 2  Diagnostic -  Assessed - Practical programming project | Formative -  Page design (visualisation diagram)  Formative -  Evaluation  Diagnostic -  Website / code | Formative – Visualisation Diagram  Formative -  Evaluation  Diagnostic -  Final Game: Design, Game play, Complexity, Testing | Formative -  History Timeline  Formative -  Multimedia Product  Diagnostic -  Back to the Future Quiz |

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| **Year 9** | TOPIC | Programming and Algorithms  Key knowledge: Use of Python, problem solving and programming.  Key skills: Problem solving, programming with Python | Web Design  Key knowledge: interpretation of client brief, audience and purpose. Web Design skills  Key skills: Interpretation of client brief, audience and purpose. Web Design | IT for Business  Key knowledge: Marketing, planning, presentation, skills for Business, finances team work  Key skills: Planning, Presenting information, IT skills for business. Working as part of a team. | Networks and Cyber Security  Key knowledge: how data is stolen and corrupted, the value of data and how it is used, protecting against attacks  Key skills: Drawing tools to create topology diagrams. Problem solving. | Computer hardware – Data  Key knowledge: Computer components; inside my PC, how hardware works, processing data.  Key skills: Application of maths. Drawing and understanding logic gates.  Linking learning: This topic builds on the knowledge gained in year 7 when exploring computer hardware in a more generic way. | Graphics  Key knowledge: Use of graphic design, graphic creation, photoshop skills  Key skills: Photoshop skills: analysing graphics, layers, tools, filters, removing backgrounds |
| ASSESSMENT | Formative – Flow Chart  Formative – Python Code Project  Diagnostic - Unit Quiz | Formative – Planning tools  Formative - Website  Diagnostic - Unit Quiz | Formative – Marketing Poster  Formative – Finances  Diagnostic - Unit Quiz | Formative – Network Topology  Formative – Security Leaflet  Diagnostic -  Unit Quiz | Formative -  Logic gate task  Formative -  Data representation task  Diagnostic - End of unit quiz | Formative –  Graphic Design  Formative -  Graphic creation  Diagnostic - End of unit Quiz |