**KS3 IT Topics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Autumn A** | **Autumn B** | **Spring A***s* | **Spring B**  | **Summer A** | **Summer B** |
| **Year 7** | TOPIC | Intro to Computing & ProgrammingKey knowledge:Using school systems, ICT skills, presenting information, ESafetySkill 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 ManagementProject 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 HTMLKey knowledge:Web page design, HTML, page layout and graphicsSkill Focus - Web design, page layout/graphic | Computer HardwareKey knowledge:Computer components; inside my PC, how hardware works, processing data.Presenting information – Office skills, Research skills | Arcade Game MakerKey knowledge:Project planning, developing gamesSkill 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 TaskFormative - 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. IterationSkill Focus - Programming | HTML & CSSKey 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 techniquesSkill Focus - Programming & Evaluation | Back to the Future Key knowledge: Chronological developments, multimedia.Skill Focus - IT Skills, multimedia, research |
| ASSESSMENT | Formative – Copyright BookletFormative – 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 1Formative – Python Code 2Diagnostic -Assessed - Practical programming project  | Formative - Page design (visualisation diagram)Formative - EvaluationDiagnostic -Website / code  | Formative – Visualisation Diagram Formative - EvaluationDiagnostic - Final Game: Design, Game play, Complexity, Testing  | Formative - History Timeline Formative - Multimedia ProductDiagnostic -Back to the Future Quiz  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Year 9** | TOPIC   | Programming and Algorithms Key knowledge: Use of Python, problem solving and programming.Key skills: Problem solving, programming with Python | Web DesignKey knowledge: interpretation of client brief, audience and purpose. Web Design skillsKey skills: Interpretation of client brief, audience and purpose. Web Design  | IT for BusinessKey knowledge: Marketing, planning, presentation, skills for Business, finances team workKey skills: Planning, Presenting information, IT skills for business. Working as part of a team. |  Networks and Cyber SecurityKey knowledge: how data is stolen and corrupted, the value of data and how it is used, protecting against attacksKey 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 skillsKey skills: Photoshop skills: analysing graphics, layers, tools, filters, removing backgrounds |
| ASSESSMENT | Formative – Flow Chart Formative – Python Code ProjectDiagnostic - Unit Quiz  | Formative – Planning toolsFormative - WebsiteDiagnostic - Unit Quiz  | Formative – Marketing Poster Formative – Finances Diagnostic - Unit Quiz  | Formative – Network TopologyFormative – Security Leaflet Diagnostic - Unit Quiz | Formative - Logic gate task Formative - Data representation taskDiagnostic - End of unit quiz  | Formative – Graphic Design Formative - Graphic creation Diagnostic - End of unit Quiz  |