**Ferham Primary School – Computing Overview 2023 – 24**

**Unit Summaries**

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|  | **Computing systems and networks** | **Creating media** | **Programming A** | **Data and information** | **Creating Media** | **Programming B** |
| **Year 1** | **1.1 Technology around us**  Recognising technology in school and using it responsibly  **Laptop -**  **https://paintz.app/** | **1.2 Digital painting**  Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.  **Laptop – Microsoft Paint or similar** | **1.3 Moving a robot**  Writing short algorithms and programs for floor robots, and predicting program outcomes.  **Bee-Bots**  **Internet link** | **1.4 Grouping data**  Exploring object labels, then using them to sort and group objects by properties.  **Laptop – Google slides** | **1.5 Digital writing**  Using a computer to create and format text, before comparing to writing non-digitally.  **Laptop – Microsoft Word** | **1.6 Programming animations**  Designing and programming the movement of a character on screen to tell stories.  **Desktop/ Tablets – Scratch Jr** |
| **Year 2** | **2.1 Information** technology around us  Identifying IT and how its responsible use improves our world in school and beyond.  **Desktop - powerpoint** | **2.2 Digital photography**  Capturing and changing digital photographs for different purposes.  **Tablet** | **2.3 Robot algorithms**  Creating and debugging problems, and using logical reasoning to make predictions.  **Bee-Bots**  **Internet link** | **2.4 Pictograms**  Collecting data in tally charts and using attributes to organise and present data on a computer.  **Laptop - j2data Branch and Pictogram** | **2.5 Digital music**  Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.  **Desktop – Chrome Music Lab** | **2.6 Programming quizzes**  Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.  **Desktop/ Tablets – Scratch Jr** |
| **Year 3** | **3.1 Connecting computers**  Identifying that digital devices have inputs, processes and outputs, and how devices can be connected to make networks.  **Laptops – painting program** | **3.2 Stop-frame animation**  Capturing and editing digital still images to produce a stop-frame animation that tells a story.  **Tablet – iMotion app** | **3.3 Sequencing sounds**  Creating sequences in a block-based programming language to make music.  **Laptop - Scratch** | **3.4 Branching databases**  Building and using branching database to group objects using yes/ no questions.  **Laptop - j2data Branch and Pictogram** | **3.5 Desktop publishing**  Creating documents by modifying text, images and page layouts for a specified purpose.  **Canva.com** | **3.6 Events and actions in programs**  Writing algorithms and programs that use a range of events to trigger sequences of actions.  **Laptop - Scratch** |
| **Year 4** | **4.1 The internet**  Recognising the internet as a network of networks including the WWW, and why we should evaluate online content. | **4.2 Audio production**  Capturing and editing audio to produce a podcast, ensuring that copyright is considered.  **Laptop - Audacity** | **4.3 Repetition in shapes**  Using a text-based programming language to explore count-controlled loops when drawing shapes.  **Laptop - FMSLogo** | **4.4 Data logging**  Recognising how and why data is collected over time, before using data loggers to carry out an investigation.  **Data loggers – order from SYTH** | **4.5 Photo editing**  Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.  Laptop – **Paint.Net** | **4.6 Repetition in games**  Using a block-based programming language to explore count-controlled and infinite loops when creating a game.  **Laptop - Scratch** |
| **Year 5** | **5.1 Systems and searching**  Recognising IT systems in the world and how some can enable searching on the internet.  **Laptop – Google slides** | **5.2 Video production**  Planning, capturing, and editing video to produce a short film.  **Desktop – Microsoft Photos** | **5.3 Selection in physical computing**  Exploring conditions and selection using a programmable microcontroller.  **Crumble Kit** **– order from SYTH** | **5.4 Flat-file databases**  Using a database to order data and create charts to answer questions.  **Laptop - j2data Database** | **5.5 Introduction to vector graphics**  Creating images in a drawing program by using layers and groups of objects.  **Desktop – Google Drawings** | **5.6 Selection in quizzes**  Exploring selection in programming to design and code an interactive quiz.  **Laptop - Scratch** |
| **Year 6** | **6.1 Communication and collaboration**  Exploring how data is transferred by working collaboratively online.  **Laptop – Google slides** | **6.2 Webpage creation**  Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation. | **6.3 Variables in games**  Exploring variables when designing and coding a game.  **Laptop - Scratch** | **6.4 Introduction to spreadsheets**  Answering questions by using spreadsheets to organise and calculate data.  **Laptop – Google Sheets/ Microsoft Excel** | **6.5 3D modelling**  Planning, developing, and evaluating 3D computer models of physical objects.  **Laptop – Tinkercad.com** | **6.6 Sensing movement**  Designing and codding a project that captures inputs from a physical device.  **Laptop – Microbit and Microsoft MakeCode** |