**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 usIdentifying 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** |