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| D:\Blyton School Logo.jpgBlyton cum Laughton Church of England Primary School  Reading-Inspired Curriculum    CURRICULUM KNOWLEDGE & SKILLS PROGRESSION: COMPUTING Subject Responsibility: Mr Duke | | | | | | | | |
|  | **Autumn 1** | **Autumn 2** | **Spring 1** | | **Spring 2** | | **Summer 1** | **Summer 2** |
| Olive EYFS/Year 1 |  |  | **E-Safety – Early Years**  Hector’s World  Smartie the Penguin | |  | |  |  |
| Extraordinary Lives |  |  |  | |  | |  |  |
| Ivy Year 1/2  Cycle 1 & 2 | **To be used during Mathematics Data Handling focus - Y2: Introduce Data Handling**   * Understand what data is and collect it as a tally * Label a pictogram and add data to each column * Edit a table with correct titles and numbers * Create a bar chart/pie chart/line chart suitable for the data * Interpret a pictogram/bar chart/line chart | | | | | | | |
| **Y1: Digital Art**  Change the colour of individual pixels to accurately re-create basic artwork   * Make changes where required * Change the colour of individual pixels to accurately re-create detailed artwork   **Y2: Digital Art**  Use lines and fill tools to make interesting patterns   * Add a variety of shapes (outlines and fill) and label them with text * Re-create a graphic using pixels in different colours | **Y1: Early Music Creation**   * Understand that different instruments make their own sound and that instruments can be divided into groups * Create a rhythm using a pattern of beats * Create digital sounds using patterns and shapes * Create a simple melody using patterns and adjust tempo   **Y2 Internet Research**  Understand how a web-page displays information in different ways; text, images, videos and interactive elements   * Use a web-page to answer questions | | **E-Safety 5-7**   * Keeping Personal Information Private * Why do websites want personal information? * Identify where to go for help and support when concerned * What to do if something upsets us online * What are the dangers of sharing photos online? * People are not always who they say they are when online and keep personal information private * Can we trust everything we find on the internet? * Why is it important to be responsible on the internet? | | **Y2: Animation Software: I Can Animate**   * Use technology purposefully to create, organise, store, manipulate and retrieve digital content * Copy/clone a frame and move objects to create an animation, including flipping objects * Create an animation with multiple objects moving simultaneously * Create screen-recording animation * Create stop-motion animation with photos | **Y1: Introduce Programming**   * Understand sequence and algorithms * Sequence instructions (commands) to achieve an objective * Use distances in commands * Predict, write, execute and debug a simple program   **Y2: Develop Programming**   * Create and debug simple programs by selecting code blocks, placing them in the correct sequence and executing a program * Use logical reasoning to predict the behaviour of simple programs * Simplify a program by using a loop | **Y2: Programming with Scratch Jr**   * Program movements * Program inputs (touch or clicking) * Program outputs for audio or text * Find errors in a program * Program conditions   Instructions Not Included: How a Team of Women Coded the Future:  Amazon.co.uk: Lewis Brown, Tami, Loren Dunn, Debbie, Beck, Chelsea: Books  **Book: Instructions Not Included by Tami Lewis Brown, Debbie Loren Dunn & Chelsea Beck** |
| Extraordinary Lives |  |  | |  | |  |  | **INNOVATORS: Betty Snyder, Jean Jennings & Kay McNulty** |
| Willow Year 3/4  Cycle 1 & 2 | **Y3 Document Editing and Creation**   * Copy and paste text images * Find and replace words * Format text for a purpose * Edit images inside documents * Add bullet points to make lists * Experiment with keyboard shortcuts   **Y4 Internet Research** Appreciate how search results are selected and ranked and show awareness of different strategies for finding information   * Understand the features of an Internet Browser * Use search technologies (different websites) to find specific pieces of information * Reference the correct source of information * Be discerning in evaluating digital content * Check the internet for fake news by cross-referencing facts | **Y3: Programming in Scratch**   * Design, write and debug programs that accomplish specific goals (including outputs) * Use repetition in programs * Work with various forms of input; keyboard, mouse and touch screen * Write programs that simulate physical systems   **Y4: Programming in Scratch**   * Use sequence, selection and repetition in programs * Work with variables and various forms of input and output * Debug programs that accomplish goals (correcting errors) * Work with variables and conditions | | **E-Safety 7-9**   * Understand what to do if something upsets you online * Understand why and how people can be nasty online * Describe the term ‘sharing online’ and why we need to get permission to share photos and videos of other people * Understand why people pretend to be someone else online * Understand why we only talk to people we know in the real world, when online * Understand why we should not always trust what we read online and how to check * Understand the importance of being kind in the real world and also online | | **Y3: Comic Creation**  Add, resize and organise colour or picture backgrounds   * Add, resize, organise characters/objects to different panels * Add narration using text and direct speech using speech bubbles   **Y3: Digital Storyboards**  Add and edit backgrounds   * Add and edit characters, including changing posture, expression and clothing * Add narration and speech bubbles, including formatting text * Duplicate objects to match scenes * Search for objects to use | **Y3 3D Design**  Understand and use 3D space on a grid   * Re-create or design familiar 3D models using cubes, such as tables and chairs * Use chisel tool to improve and adapt models * Colour individual blocks or whole models   **Y4 3D Design**   * Understand 3D special awareness * Add 3D shapes, resize, adjust height, duplicate and use the different perspective * Re-create different types of buildings using 3D shapes * Create roads/paths by adjusting the height of 3D shapes * Add windows and door shapes | **Y3: Branching Databases**   * Add and label objects * Ask questions to sort (classify) objects correctly   **Y4: Ebook Creation**  Add page, colour and style   * Add, position and format text on different pages * Add and position images from camera/web * Add audio, including hiding it behind an object * Add hyperlinks to text and images * Add and format shapes * Use hyperlinks for navigation * Add audio to pages |
| Extraordinary Lives | **INNOVATOR: Tim Berners-Lee** | **INNOVATOR: Ada Lovelace** | |  | |  |  |  |
| Fig Year 4/5 | **Y5: Computer Networks and the Internet**   * Understand Computer Networks, Internet and Cloud Computing and how they help us * Know how to use email safely * Understand how and why we collaborate online (including blogging) | **Y5: App Design**  Use the tools in different presentation software (Powerpoint, Keynote, Google Slides) to design an app about the term’s topic with:   * Slide size and background colour * Text and images on different pages * Icons * Interactions using hyperlinks | | **E-Safety 7-9**   * Understand what to do if something upsets you online * Understand why and how people can be nasty online * Describe the term ‘sharing online’ and why we need to get permission to share photos and videos of other people * Understand why people pretend to be someone else online * Understand why we only talk to people we know in the real world, when online * Understand why we should not always trust what we read online and how to check * Understand the importance of being kind in the real world and also online | | **Y4: Programming in Scratch (and Codebugs)**   * Use sequence, selection and repetition in programs * Work with variables and various forms of input and output * Debug programs that accomplish goals (correcting errors) * Work with variables and conditions   **Y5: Programming in Scratch (and Codebugs)**   * Program list variables * Program inputs, conditions and sensing for interaction, data variables for scoring and a game timer * Program inputs, loops, conditions, sensing and variables | **Y5: EBook Creation**  Add page colour and style   * Add, position and format text on different pages * Add and position images * Add audio, including hiding it behind an object * Add hyperlinks to text and images * Search for shapes * Lock and arrange shapes | **Y5: Data Handling**  Select and use non-adjacent cells plus resize multiple cell widths and copy/past cells   * Find data and create a spreadsheet to suit it * Use formulae to find totals, averages and maximum/minimum numbers * Search a database for specific information |
| Extraordinary Lives | **INNOVATOR: Steve Jobs** |  | | **INNOVATOR: Grace Hopper** | |  |  | **INNOVATOR: Margaret Hamilton** |
| Clover Year 5/6 | **Y6: Graphic Design**  Add, adjust and fill shapes   * Group shapes to improve accuracy and speed * Add and customise gradient effects * Adjust transparency/opacity for a purpose * Use a colour picker correctly (Powerpoint) * Accurately rotate shapes | **Y6: Programming in Scratch**   * Program inputs, conditions, random variables for unpredictability, game timer * Program inputs, conditions, sensing, random variables, operators for direction and data variables for scoring * Use inputs, conditions, loops, sensing, costume changes and broadcasts * Work with multiple sprites to send broadcast messages between them | | **E-Safety 9-11**  Know to keep personal information private   * Respect and protect against bullies * Understand the consequences of sharing photo/videos online * Understand the term digital footprint * Know how to check online content is trustworthy * Know how and where to report concerns we have. | | **Y5: Sphero Programming**   * Understanding Bluetooth Technology as Input Device * Write programs for the Sphero using movement and repetition (loops) * Write a program to trace a maze/route with Sphero and De-bug * Write a program with outputs * Write a program with random variables | **Y6: Machine Learning and Artificial Intelligence**  Understand how computers use information to learn by solving new problems and following new instructions   * Understand and use examples of machine learning * Understand how artificial intelligence is used to perform tasks often only performed by humans * Discuss and show awareness of potential dangers | **Y6 Web Design**  Use and combine a variety of software (including internet services) to design and create content that accomplishes given goals   * Add and format text within a website * Organise sections and pages * Add and edit images * Include other features such as hyperlinks, buttons and files * Evaluate other websites and provide constructive feedback * Make necessary changes to the website based on feedback |
| Extraordinary Lives | **INNOVATOR: Charles Babbage** | **INNOVATOR: Alan Turing** | |  | |  |  |  |