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| **Year Group**  | **Term 1** | **Term 2** | **Term 3** | **Term 4** | **Term 5** | **Term 6** |
| **Year 1** | **Technology around us**Identify technology. Describe the main parts of a computer. Develop the use of a mouse and keyboard. Create rules for using technology safely. | **Digital Painting**Explore the different paint, shape and line tools in a graphics program. Create a digital painting based on Kandinsky. Compare painting digitally to physically. | **Digital writing**Use a computer to write by adding and removing text. Identify that the appearance of text (font) can be changed. Make careful choices with text when typing a short story. | **Grouping Data**Using a computer to count and group objects with the same properties. Answer questions about groups of objects. | **Programming Movement****(Beebots)**Explain what commands with do and act out physically. Create a sequence of up to four directional movements. Plan a simple program to reach a location. | **Programming Movement****(Scratch Jnr)**To choose commands to fulfil a purpose. Join commands together to make a sequence. Explain the effect of changing a value. Know that each sprite has its own commands. Plan an algorithm and create a program from it. |
| **Year 2** | **IT Around Us**Recognise the meaning, uses and features of IT. Identify IT in school and the wider world. Explain how IT can help complete a task. Explain how to use IT safety. | **Digital Photography**Use a tablet to take a photograph. Make choices and describe what makes a good photograph. Decide how a photograph could be improved and understand photos can be changed. Use tools to change an image. | **Making Music**Explain how music makes you feel. Know that it is made from a pattern of notes. Create music digitally by creating repeating patterns. | **Pictograms**Understand that objects can be represented as pictures. Create a pictogram using data. Draw conclusions and make comparisons. Know that we can present data using a computer. | **Programming Sequence****(Beebots)**Create and follow instructions in a sequence physically. Experiment with changing the order of a sequence. Predict the outcome of a sequence. Design an algorithm and debug their own program. | **Programming a Quiz****(Scratch Jnr)**Know that commands begin with a start event. Know that the sequence has an outcome. Create a program to their own design. Assess and debug their program. |
| **Year 3** | **Connecting Computers**Understand that devices function using inputs and outputs. Explain some uses of digital devices for work. Know that computers can be connected together with a switch and identify physical components of a network. | **Animation**Know that animation is a series of images. Create simple movement using flip-book and stop frame animation. Plan a short animation. Add other media to our animation (music, sound effects, narration) | **Programming – Sequence****(Scratch 3)**Explore the scratch environment with micro-projects. Understand that commands are presented as a sequence of blocks. Know that each sprite has its own sequence of commands. | **Branching Databases**Create questions with yes/no answers. Collect data based on object attributes. Create a branching database to detect an object from a series of questions. Explain how the database helps us and compare with other ways of presenting data. | **Desktop Publishing**Understand that images and text convey information. Experiment with editing text and layout for effect. Set up a page using a template. Create a magazine front cover using a template. Describe the benefits of desktop publishing. | **Programming - Sequence****(Scratch 3)**Predict the outcome of a sequence of commands. Program a sprite to move in four directions. Adapt a program to a new context of their own design. Identify and fix bugs. |
| **Year 4** | **The Internet**Describe how networks physically connect to one another. Describe some services delivered on the WWW. Describe how content can be shared and accessed on the WWW. Explain rules for sharing content online. Evaluate unreliable content and its consequences. | **Audio Editing**Identify ways of recording digitally. Discuss podcasts and record a conversation. Understand that a recording is stored as a file and that it can be edited. Combine different types of audio to make a short radio play. | **Programming – Using Loops to draw shapes**Explore an algorithm for drawing a shape. Explain the changes made by adjusting a value. Use repeat to make the code more efficient. Modify a count-controlled loop. Decompose the task of creating more shapes into small steps. | **Data Logging**Understand that data gathered over time can be used to answer questions. Explore a device that can log data automatically. Understand the meaning of ‘data point’. Use and present data collected over a period of time. Use collected data to answer questions. | **Photo Editing**Explain that digital images can be changed and the purposes for doing so. Edit the composition of an image. Select appropriate editing tools for retouching an image. Evaluate the positive and negative of image editing. | **Programming – Loops****(Scratch 3)**Describe the difference between count-controlled loops and infinite loops. Decompose a program which uses both loops. Design a program which uses loops for repetition. |
| **Year 5** | **Sharing Information**Explain how computers can be connected into systems. Describe the role of computer systems in our lives. Describe how people contribute to a project, share online and work together remotely. Contribute to a shared online project. | **Video Editing**Explain what makes an effective video. Identify some digital devices used in video production. Capture video using a range of techniques and evaluate it. Planning a storyboard. Consider how a video can be improved through reshoots and editing. Consider the choices we make when we share a video. | **Programming – Selection****(Scratch 3)**Understand how selection is used in computer programs: statements connected to outcomes. Explain how selection directs the flow of a program. Design a program using selection. Evaluate and debug their program. | **Flat-file Databases**Create a paper database and understand its uses. Use grouping and sorting to answer questions physically and digitally. Use knowledge of databases to answer real-world questions. Use a computer program to display data visually.  | **Vector Drawing**Investigate the tools used in vector drawing. Create vector drawings and understand that they are created by combining shapes. Use layers to add to their vector drawings. Group objects to make tasks easier. | **Programming – Selection****(Microbit)**Control a simple circuit connected to a computer. Write a program using count-controlled loops. Explain the outcome when the condition is met. Design a physical project using count-controlled loops and selection. |
| **Year 6**  | **Computer Communication**Identify search engines and how they select/rank results. Discuss ways to communicate online. Evaluate communicating online. Judge consequences of sharing and that communication may not be private. | **Web Page Design**Review a website and consider its structure. Plan the features of a web page. Consider ownership of online content (copyright) and the implications of linking to content owned by other people. | **Programming – Variables****(Scratch 3)**Define a variable as something changeable and understand its use in programming. Improve a game by adding a variable. Design a program which uses a variable. | **Spreadsheets**Identify that questions can be answered with data. Build a data set within a spreadsheet (Excel). Use formulas to calculate data. Create a spreadsheet to plan an event and calculate cost. Choose an appropriate way to present data. | **3D Modelling**Use a computer to manipulate 3D objects. Compare the application of 2D/3D images. Understand that physical objects can be decomposed into 3D shapes. Construct a 3D model by combining 3D shapes. | **Programming – Sensing****(Lego Wedo)**Create a program to be run on a controllable device. Explain how selection can control the flow of the program. Use variables and senses with the inputs of a device. |