|  |  |  |
| --- | --- | --- |
| **Computing** | | |
| **Term 1.1**  **Computer systems and networks 1: Networks** | | |
| Vocabulary | Knowledge | Objectives |
| Device  Server  Router  Packet data  User  Wireless access point | Understand the need to be thoughtful when working on a collaborative document.  Use comments to suggest changes to a document and understand how to resolve comments.  Use a variety of different slide styles to convey information including images and transitions.  Create a Google Form with a range of different questions types that will provide different types of answers, e.g. text, multiple choice or numerical values.  Export data to a spreadsheet, highlighting data, using conditional formatting and calculating averages and sums of numbers. | I can understand that a network is a group of interconnected devices.  I can know the components that make up a network (Wireless access point/WAP, Network switch, Router, Server and devices).  I can know that a server is central to a network and responds to requests made.  I can know that the internet connects all the networks around the world.  I can know that a router connects us to the internet.  I can know what a packet is and why it is important for website data transfer. |
| **Term 1.2**  **Programming 1: Further coding with Scratch** | | |
| Vocabulary | Knowledge | Objectives |
| Code block  Conditional statement  Coordinates  Variable  Orientation  Decompose | Understand how to create a simple script in Scratch.  Add or change a sprite and prevent it from rotating.  Use decomposition to identify key features and understand how to decipher actions that make the quiz game work.  Understand what a variable is and how to use the ‘say’ and ‘ask’ blocks.  Create a variable and be able to use a variable to record a score.  Understand what a variable is and how it works within a program. | I can understand that a variable is a value that can change (depending on conditions) and know that you can create them in Scratch.  I can know what a conditional statement is in programming.  I can know that using variables can help you to create a quiz on Scratch. |
| **Term 2.1**  **Creating media: Website design** | | |
| Vocabulary | Knowledge | Objectives |
| Hyperlinks  Embed  Published  Theme  Subpage  Content | Building a web page and creating content for it.  Designing and creating a webpage for a given purpose.  Using software to work collaboratively with others. | I can know that a website is a collection of pages that are all connected.  I can know that websites usually have a homepage and subpages as well as clickable links to new pages, called hyperlinks.  I can know that websites should be informative and interactive. |
| **Term 2.2**  **Skills showcase: HTML** | | |
| Vocabulary | Knowledge | Objectives |
| Copyright  End tag  HTML  Remixing  Web page elements  URL | Recognise the role of HTML in a web page.  Add text between the heading and paragraph tags.  Explore a web page using the inspect tool.  Explain how they altered the HTML to create their posters.  Alter the basic elements within a web page using the inspect tool.  Replace the text and images in a webpage | I can know and identify examples of HTML tags.  I can know what changing the HTML does to alter the appearance of an object on the web.  I can know that Copyright means that those images are protected and to understand that people should use a ‘Creative Commons’ image search if they wish to use images from the internet.  I can understand what fake news is and ways to spot websites that carry this type of misinformation.  I canunderstand what the inspect tool is and ways of using it to explore and alter text and images. |
| **Term 3.1**  **Programming: Computational thinking** | | |
| Vocabulary | Knowledge | Objectives |
| Abstraction  Algorithm  Logical reasoning  Output  Sequence  Script | Understand that problems can be solved more easily using computational thinking.  Understand what the different code blocks do and create a simple game.  Understand the terms ‘pattern recognition’ and ‘abstraction’ and how they help to solve a problem.  Create a Scratch program which draws a square and at least one other shape.  Understand how computational thinking can help to solve problems and apply computational thinking to problems they face. | I can know that combining computational thinking skills can help you to solve a problem.  I can understand that pattern recognition means identifying patterns to help them work out how the code works.  I can understand that algorithms can be used for a number of purposes e.g. animation, games design etc. |
| **Term 3.2**  **Data handling: Investigating weather** | | |
| Vocabulary | Knowledge | Objectives |
| Cylinder  Heat sensor  Pinwheel  Presenter  Backdrop  Collaboration | Search the web efficiently to find temperatures of different cities and record this accurately.  Design a weather station that gathers and records sensor data, explaining how it works and the units of measurement it would use.  Design an automated machine that uses selection to respond to sensor data.  Search for and record weather forecast information in a spreadsheet and explain how this data is collected.  Create a video which includes weather forecast information. | I can know that computers can use different forms of input to sense the world around them so that they can record and respond to data (‘sensor data’).  I can know that a weather machine is an automated machine that respond to sensor data.  I canunderstand that weather forecasters use specific language, expression and pre-prepared scripts to help create weather forecast films. |
| **Online safety**  **Taught in every unit** | | |
| Vocabulary | Knowledge | Objectives |
| Implications  Reliable  Snippets  Sponsored  Opinion  Bot | Describe how to search over multiple platforms and be aware of the accuracy of the results presented.  Describe some of the methods used to persuade people to buy online.  Explain the difference between fact, opinion and belief and recognise these online.  Explain what a bot is and give examples of different bots.  Explain some positive and negative distractions of using technology and small strategies for reducing the time spent on technology. | I can know some of the methods used to encourage people to buy things online.  I can know technology can be designed to act like or impersonate living things.  I can know technology can be a distraction and identify when someone might need to limit the amount of time spent using technology.  I can know what behaviours are appropriate to stay safe and be respectful online. |