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| **Unit 1: Online Safety -** | | **Y4 Skills:** |
| 1 | Describing how to search for information within a wide group of technologies and make a judgement about the probable accuracy. | **Online Safety-:**  **Key knowledge:**   * To understand some of the methods used to encourage people to buy things online. * To understand that technology can be designed to act like or impersonate living things. * To understand that technology can be a distraction and identify when someone might need to limit the amount of time spent using technology. * To understand what behaviours are appropriate in order to stay safe and be respectful online.   **Key vocabulary:**  accuracy, advantages, advertisements, belief, bot, chatbot, computer, distractions, fact, hashtag, implications, in-app purchases, influencer, opinion, program, recommendations, reliable, risks, screen time, search results, snippets, sponsored, trustworthy  **Computing Systems and Networks-:**  **Key knowledge:**   * To know the roles that inputs and outputs play on computers. * To know what some of the different components inside a computer are e.g. CPU, RAM, hard drive, and how they work together. * To know what a tablet is and how it is different from a laptop/desktop computer.   **Key vocabulary:**  algorithm, assemble, CPU (central processing unit), data, decompose, desktop, disassemble, GPU (graphics processing unit), hard drive, HDD (hard  disk drive), infinite loop, input, keyboard, laptop, memory, microphone, monitor, mouse, output, photocopier, program, QR code, RAM (random access memory), ROM (read only memory), storage, tablet device, technology, touchscreen, touchpad |
| 2 | Describing some of the methods used to encourage people to buy things online. |
| 3 | Explaining why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true. |
| 4 | Explaining that technology can be designed to act like or impersonate living things. |
| 5 | Explaining how technology can be a distraction and identify when I might need to limit the amount of time spent using technology. |
|  | Adaptations: |
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| **Unit 2: Computing Systems and Networks: Journey Inside a Computer (Y3 Level) -** | |
| 1 | Recognising basic inputs and outputs of a computer. |
| 2 | Decomposing a laptop, using logic to explain the purpose of some parts. |
| 3 | Understanding the purpose of computer parts and following an algorithm. |
| 4 | Understanding the purpose of computer parts, explaining that a computer is made up on many parts. |
| 5 | Decomposing a tablet computer, comparing similarities and differences across different types of computer. |
|  | Adaptations: |

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| **Unit 3: Programming: Further Coding with Scratch-** | | Logo  Description automatically generated**Y4 Skills:** |
| 1 | Recalling the key features of Scratch. | **Programming-:**  **Key knowledge:**   * To understand that a variable is a value that can change (depending on conditions) and know that you can create them in Scratch. * To know what a conditional statement is in programming. * To understand that variables can help you to create a quiz on Scratch.   **Key vocabulary:**  broadcast block, code blocks, conditional, coordinates, decomposition, features, game, information, negative numbers, orientation, parameters,  position, program, project, script, sprite, stage, tinker, variables  **Data Handling-:**  **Key knowledge:**   * To 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’). * To know that a weather machine is an automated machine that respond to sensor data. * To understand that weather forecasters use specific language, expression and pre-prepared scripts to help create weather forecast films.   **Key vocabulary:**  accurate, backdrop, climate zone, cold, collaboration, condensation, cylinder, degrees, evaporation, extreme weather, forecast, heat sensor,  lightning, measurement, pinwheel, presenter, rain, satellite, script, sensitive, sensor data, solar panel, tablet/digital camera, temperature,  thermometer, tornado, warm, weather, weather forecast, wind |
| 2 | Understanding how a Scratch game works by using decomposition to identify key features. |
| 3 | Understanding what a variable is and how to make one. |
| 4 | Understanding how to make a variable in Scratch. |
| 5 | Using knowledge of how variables work to create a quiz. |
|  | Adaptations: |
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| **Unit 4: Data Handling: Investigating Weather (Microsoft 365 Version) -** | |
| 1 | Logging data taken from online sources within a spreadsheet. |
| 2 | Designing a weather station. |
| 3 | Designing an automated machine to respond to sensor data. |
| 4 | Designing an automated machine to respond to sensor data. |
| 5 | Using tablets or digital cameras to present a weather forecast. |
|  | Adaptations: |

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| **Cross-Curriculum Links:** | |
| Unit 1 | RSE and PSHE |
| Unit 2 | English: Spoken language  Design and technology |
| Unit 3 | Maths: 2-D grids, coordinates and translations. Multiplication and division facts for the 3, 4 and 8 tables.  English: Spoken Language – speculating, hypothesising, imagining and exploring ideas. |
| Unit 4 | Science – temperature, eveporation and condensation, water cycle, observations and accurate measurements.  Geography – physical geography including climate zones, biomes, vegetation belts, rivers, mountains, volcanoes and earthquakes. Maps, atlases, globes and digital/computer mapping. Counties and cities of the United Kingdom.  Maths – bar charts, pictograms, tables and other graphs.  English: Spoken Language – discussions, presentations, performances, role play, improvisations and debates. |