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| **Unit 1: Online Safety -**  | **Y2 Skills:** |
| 1 | Knowing what happens to information posted online. | **Online Safety-:****Key knowledge:*** To understand the difference between online and offline.
* To understand what information I should not post online.
* To know what the techniques are for creating a strong password.
* To know that you should ask permission from others before sharing about them online and that they have the right to say ‘no.’
* To understand that not everything I see or read online is true.

**Key vocabulary:**accept, comment, consent, content, deny, emojis, offline, online, password, permission, personal information, pop-ups, pressure, privateinformation, reliable, share, terms and conditions, trusted adult**Computing Systems and Networks-:****Key knowledge:*** To know the difference between a desktop and laptop computer.
* To know that people control technology.
* To know some input devices that give a computer an instruction about what to do (output).
* To know that computers often work together.

**Key vocabulary:**battery, buttons, camera, computer, desktop, device, digital, digital recorder, electricity, function, input, invention, keyboard, laptop, monitor,mouse, output, paying till, scanner, screen, system, tablet, technology, video, wires |
| 2 | Knowing how to keep things safe and private online. |
| 3 | Explaining what should be done before sharing information online. |
| 4 | Explaining why I have the right to say no and deny permission. |
| 5 | Understanding strategies that will help me decide if something seen online is true or not. |
|  | Adaptations: |
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| **Unit 2: Computing Systems and Networks: What is a computer? -**  |
| 1 | Recognising that a computer is made up of different components.  |
| 2 | Recognising that buttons cause effects and that technology follows instructions. |
| 3 | Recognising which objects use technology. |
| 4 | Creating a design for an invention, which includes inputs and outputs. |
| 5 | Understanding the role of computers and where they are used. |
|  | Adaptations: |

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| **Unit 3: Programming: Algorithms and Debugging -**  | Logo  Description automatically generated**Y2 Skills:** |
| 1 | Decomposing a game to predict the algorithms that are used. | **Programming-:****Key knowledge:*** To understand what machine learning is and how it enables computers to make predictions.
* To know that loops in programming are where you set a certain instruction (or instructions) to be repeated multiple times.
* To know that abstraction is the removing of unnecessary detail to help solve a problem.

**Key vocabulary:**abstraction, algorithm, artificial intelligence, bug, clear, correct, data, debug, decompose, error, key features, loop, predict, unnecessary **Data Handling-:****Key knowledge:*** To understand that you can enter simple data into a spreadsheet.
* To understand what steps you need to take to create an algorithm.
* To know what data to use to answer certain questions.
* To know that computers can be used to monitor supplies.

**Key vocabulary:**algorithm , astronaut, data, digital, digital content, experiment, galaxy, insulation, interactive map, International Space Centre, International SpaceStation, interpret, laboratory, monitor, planet, satellite, sensor, space, temperature, thermometer, water reservoir |
| 2 | Understanding that computers can use algorithms to make predictions (machine learning). |
| 3 | Planning algorithms that will solve problems. |
| 4 | Understanding what abstraction is, giving an example of when abstraction might be useful. |
| 5 | Understanding what debugging is, listening to and performing step-by-step instructions. |
|  | Adaptations: |
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| **Unit 4: Data Handling: International Space Centre -**   |
| 1 | Understanding how computers can help humans survive in space. |
| 2 | Creating a digital drawing of essential items for life in space. |
| 3 | Understanding the role of sensors on the International Space Station.  |
| 4 | Creating an algorithm for growing a plant in space.  |
| 5 | Interpreting data about water and temperatures linked to the International Space Centre. |
|  | Adaptations: |

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| **Cross-Curriculum Links:**  |
| Unit 1 | RSE and PSHE |
| Unit 2 | English: Spoken LanguageScience: Working scientificallyDesign and technology: Design |
| Unit 3 | English: Spoken language, Writing – compositionMaths: Geometry – position and directionGeography: Geographical skills and fieldwork |
| Unit 4 | Science: Animals, including humans; Living things and their habitatsMaths: Measurement |