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|  | **STRAND** | | Knowledge and understanding | | Processes and production skills  *Creating Digital Solutions by:* | | | | | | |
|  |  | | Digital Systems | Representation  of data | Collecting, managing and analysing data | Investigating and defining | Generating and designing | | Producing and  implementing | Evaluating | Collaborating and  managing |
|  | **Content Description** | | Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014 ) | Examine how whole numbers are used to represent all data in digital systems (ACTDIK015 ) | Acquire, store and validate different types of data, and use a range of software to interpret and visualise data to create information (ACTDIP016) | Define problems in terms of data and functional requirements drawing on previously solved problems (ACTDIP017 ) | Design a user interface for a digital system (ACTDIP018) | Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019) | Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020) | Explain how student solutions and existing information systems are sustainable and meet current and future local community needs (ACTDIP021) | Plan, create and communicate ideas and information, including collaboratively online, applying agreed ethical, social and technical protocols (ACTDIP022 ) |
| **Sequence of Lessons / Unit** | **Approx. time rq’d hrs** | **Year** | Achievement standard # | Achievement standard # | Achievement standard # | Achievement standard # | Achievement standard # | Achievement standard # | Achievement standard # | Achievement standard # | Achievement standard # |
| Sample: Data and information | 4 | 5 | 1 |  |  | 3 |  |  |  |  |  |
| Unit #2 |  | 6 |  |  |  |  |  |  |  |  |  |
| Unit #3 |  | 5 |  |  |  |  |  |  |  |  |  |
| Unit #4 |  | 6 |  |  |  |  |  |  |  |  |  |
| Unit #5 |  | 5 |  |  |  |  |  |  |  |  |  |
| Unit #6 |  | 6 |  |  |  |  |  |  |  |  |  |
| Unit #7 |  | 5 |  |  |  |  |  |  |  |  |  |
| Unit #8 |  | 6 |  |  |  |  |  |  |  |  |  |

*Cells highlighted in blue indicate that the unit is relevant to a component of the Year 6 Achievement standard. The number in each blue highlighted cell correlates to the numbered Year 6 Achievement standard in the table below.*

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| **Levels 3 and 4 Achievement Standard** | **Levels 5 and 6 Achievement Standard**  The numbering of the Achievement Standards below is reflected in the grid above to show coverage across the 8 units. | **Levels 7 and 8 Achievement Standard** |
| By the end of Year 4   * Students describe how a range of digital systems (hardware and software) and their peripheral devices can be used for different purposes. * They explain how the same data sets can be represented in different ways. * Students define simple problems, design and implement digital solutions using algorithms that involve decision-making and user input. * They explain how the solutions meet their purposes. * They collect and manipulate different data when creating information and digital solutions. * They safely use and manage information systems for identified needs using agreed protocols and describe how information systems are used. | By the end of Year 6:   1. Students explain the fundamentals of digital system components (hardware, software and networks) and how digital systems are connected to form networks. 2. They explain how digital systems use whole numbers as a basis for representing a variety of data types. 3. Students define problems in terms of data and functional requirements and design solutions by developing algorithms to address the problems. 4. They incorporate decision-making, repetition and user interface design into their designs and implement their digital solutions, including a visual program. 5. They explain how information systems and their solutions meet needs and consider sustainability. 6. Students manage the creation and communication of ideas and information in collaborative digital projects using validated data and agreed protocols. | By the end of Year 8   * students distinguish between different types of networks and defined purposes. * They explain how text, image and audio data can be represented, secured and presented in digital systems. * Students plan and manage digital projects to create interactive information. * They define and decompose problems in terms of functional requirements and constraints. * Students design user experiences and algorithms incorporating branching and iterations, and test, modify and implement digital solutions. * They evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability. * They analyse and evaluate data from a range of sources to model and create solutions. * They use appropriate protocols when communicating and collaborating online. |

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| **Year** | **Term** | **Unit title** | **Summary and Digital Technologies focus** | **Connections to other subject areas** |
| Year 5 | Term 1 |  |  |  |
| Term 2 |  |  |  |
| Term 3 |  |  |  |
| Term 4 |  |  |  |

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| **Year** | **Term** | **Unit title** | **Summary and Digital Technologies focus** | **Connections to other subject areas** |
| Year 6 | Term 1 |  |  |  |
| Term 2 |  |  |  |
| Term 3 |  |  |  |
| Term 4 |  |  |  |