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|  | Strand | | Knowledge and understanding | | | | Processes and production skills | | | | | | | | | |
|  |  | | Digital systems | | Representation of data | | Collecting, managing and analysing data | | *Creating digital solutions by:* | | | | | | | |
| Investigating and defining | | Producing and implementing | | Evaluating | | Collaborating and managing | |
|  | **Content Description** | | Identify and explore a range of digital systems with peripheral devices for different purposes, and transmit different types of data (ACTDIK007 ) | | Recognise different types of data and explore how the same data can be represented in different ways (ACTDIK008 ) | | Collect, access and present different types of data using simple software to create information and solve problems (ACTDIP009) | | Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010) | | Implement simple digital solutions as visual programs with algorithms involving branching (decisions) and user input (ACTDIP011) | | Explain how student solutions and existing information systems meet common personal, school or community needs (ACTDIP012) | | Plan, create and communicate ideas and information independently and with others, applying agreed ethical and social protocols (ACTDIP013) | |
| **Sequence of Lessons / Unit** | **Approx. time rq’d** | **Year** | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # | CD | Achievement standard # |
| Peripheral devices | 5 | 3 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| Exploring input and output | 7 | 4 |  | 1 |  |  |  |  |  | 3 |  | 3 |  |  |  |  |
| Secret messages and codes | 5 | 3 |  |  |  | 2 |  |  |  | 3 |  | 3 |  |  |  |  |
| Use data to solve problems | 7 | 4 |  |  |  |  |  | 5 |  |  |  |  |  |  |  |  |
| Intro to programming | 8 | 3 |  |  |  |  |  |  |  | 3 |  | 3 |  |  |  |  |
| Programing project | 12 | 4 |  |  |  |  |  |  |  | 3 |  | 3 |  | 4 |  |  |
| Communicate ideas and information | 5-7 | 3 |  | 1 |  | 2 |  |  |  |  |  |  |  | 6 |  | 6 |
| Apply protocols | 7-8 | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 |

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| **Years F-2 Achievement Standard** | **Years 3 and 4 Achievement Standard** | **Years 5 and 6 Achievement Standard** |
| By the end of Year 2   * Students identify how common digital systems (hardware and software) are used to meet specific purposes. (1) * They use digital systems to represent simple patterns in data in different ways. (2) * Students design solutions to simple problems using a sequence of steps and decisions. (3) * They collect familiar data and display them to convey meaning. (4) * They create and organise ideas and information using information systems, and share information in safe online environments. (5) | 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. (1) * They explain how the same data sets can be represented in different ways. (2) * Students define simple problems, design and implement digital solutions using algorithms that involve decision-making and user input. (3) * They explain how the solutions meet their purposes. (4) * They collect and manipulate different data when creating information and digital solutions. (5) * They safely use and manage information systems for identified needs using agreed protocols and describe how information systems are used. (6) | By the end of Year 6:   * Students explain the fundamentals of digital system components (hardware, software and networks) and how digital systems are connected to form networks. (1) * They explain how digital systems use whole numbers as a basis for representing a variety of data types. (2) * Students define problems in terms of data and functional requirements and design solutions by developing algorithms to address the problems. (3) * They incorporate decision-making, repetition and user interface design into their designs and implement their digital solutions, including a visual program. (4) * They explain how information systems and their solutions meet needs and consider sustainability. (5) * Students manage the creation and communication of ideas and information in collaborative digital projects using validated data and agreed protocols. (6) |