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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)
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