**DIGITAL TECHNOLOGIES:**

**UNPACKING THE CONTENT DESCRIPTIONS**

PLEASE NOTE:
This pack does not contain all content descriptions for Levels 5 and 6, but can be used as a guide to develop your own lesson plans

**Digital Technologies: Unpacking the Content Descriptions**

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| **Strand** | Creating Digital Solutions |  | **Sample activities** |
| **Content Description** | Design a user interface for a digital system, generating and considering alternative design ideas | * explore commonly used websites/games on a variety of devices with differently sized screens
* attempting to use a web resource or app with one hand and discussing the positive and negative experiences
* gathering information about different types of menu layouts and navigation from games, apps and websites
* highlighting layout differences such as horizontal, vertical, sidebar and visibility differences, such as dropdown lists and submenus
* explore options for games and websites to be inclusive regardless of the language spoken by the user
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| **Related extract from Achievement Standard** | They incorporate decision-making, repetition and user interface design into their designs and develop their digital solutions, including a visual program. |
| **Suggested focus** | Lessons may focus on:* investigating a range of websites with different menu layouts, fonts and colours
* investigating the layout of a variety of games on a touchscreen
* exploring the same games and websites on a variety of devices with different-sized screens and methods of providing input, such as mouse or touch-screens
* investigating design requirements
* tools used to design user interfaces
* creating simple storyboards or mock-ups representing design of user interfaces
* developing alternative design ideas with annotated designs
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| **Strand** | **Creating Digital Solutions** |  | **Sample activities** |
| **Content Description** | Explain how student-developed solutions and existing information systems meet current and future community and sustainability needs | * incorporating an energy saving function in an information system, for example to turn a device off when not in use
* evaluate the cost of producing common digital devices and the impact on the environment
* conduct an energy survey of the amount of power consumed by the school to run school-provided equipment and make recommendations to the school leadership to reduce them
* investigate different countries across the world to find out the restrictions in place, if any, regarding access to typical social media and/or browsing sites
* devise a test of the school’s servers to determine how much energy is required to keep the school’s information secure
* compare the economic, environmental and social impacts of shopping in a store and shopping online
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| **Related extract from Achievement Standard** | Students explain how information systems and their developed solutions meet current and future needs taking sustainability into account. |
| **Suggested focus** | Lessons may focus on:* developing criteria to explain how a student-developed solution meets current and future needs
* developing criteria to explain how a student-developed solution meets requirements
* understanding how people interact with touch systems, for example touch input devices require less dexterity and are designed to be accessible through the use of icons
* understanding how information systems are developed to meet a community need in terms of economic, environmental and social sustainability
* exploring how ethics and management practices impact on the use of communication networks
* understanding sustainability when considering various practices to save resources when using information systems
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**Digital Technologies: Unpacking the Content Descriptions**

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| **Strand** | **Data and Information** |  | **Sample activities** |
| **Content Description** | Examine how whole numbers are used as the basis for representing all types of data in digital systems | * investigate the use of binary
* how binary relates to the control of digital devices
* exploring binary numbers
* representing decimal numbers and converting decimal to binary
* patterns in binary when counting
* representing letters in binary then moving onto words and phrases
* representing other types of data, for example on/off pictures in binary
* identifying common digital systems/devices that use binary
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| **Related extract from Achievement Standard** | Students explain how digital systems use whole numbers as a basis for representing a variety of data types. |
| **Suggested focus** | Lessons may focus on:* understanding binary as two states, for example on or off and voltage or no voltage
* comparing number systems with different bases, for example binary and decimal
* representing numbers and text as binary
* purpose of binary numbers
* how binary is used to store and transmit different types of data
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