Achievement Standard

Subject Reference Digital Technologies and Hangarau Matihiko 3.3

Title Use complex techniques to develop a database

Level 3 **Credits** 4 **Assessment** Internal

Subfield Technology

Domain Digital Technologies

Status Approved **Status date** September 2024

Planned review date December 2028 **Date version published** December 2024

This achievement standard involves using complex techniques to develop a database.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Use complex techniques to develop a database.	• Use complex techniques to develop an informed database.	• Use complex techniques to develop a refined database.

Explanatory Notes

1 This achievement standard is derived from the Technology Learning Area at Level 8 of *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007.

This standard is also derived from *Te Marautanga o Aotearoa*. For details of *Te Marautanga o Aotearoa* achievement objectives to which this standard relates, see the Papa Whakaako for the relevant learning area.

2 *Use complex techniques to develop a database* involves:
● designing the structure of the data
● using appropriate tools and appropriate techniques to organise, query and present data for a purpose and end users
● applying appropriate data integrity and testing procedures
● addressing relevant implications.

Use complex techniques to develop an informed database involves:
● using information from testing procedures to improve the quality of the outcome
● structuring, organising and querying the data logically.

Use complex techniques to develop a refined database involves:
- iterative improvement throughout the design, development and testing process
- using efficient tools and techniques in the outcome's production
- presenting the data effectively for the purpose and end users.

3   Examples of *relevant implications* include:
- social
- cultural
- legal
- ethical
- intellectual property
- privacy
- accessibility
- usability
- functionality
- aesthetics
- sustainability and future proofing
- end-user considerations
- health and safety.

4   *Complex techniques* will include a selection from:
- structuring the data using multiple tables or nodes
- creating queries which insert, update or delete to modify data
- creating customised data displays from multiple tables or nodes (e.g. reports, PDFs, web pages, dashboards, program interfaces)
- dynamically linking data between the database and a front-end display
- applying data access permissions as appropriate to the outcome.

5   The data design structure must include the input, output, and processing.

6   Conditions of Assessment related to this achievement standard can be found at http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards.

Replacement Information
This Achievement Standard replaced AS91633.

Quality Assurance

1   Schools and institutions must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.

2   Schools and institutions with consent to assess must engage with the moderation system that applies to those achievement standards.

   Consent and Moderation Requirements (CMR) reference   0233