

Achievement Standard

Subject Reference Digital Technologies 3.3

Title Use complex techniques to develop a database

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

Subfield Technology

Domain Digital Technologies

Status XX **Status date** XX

Planned review date XX **Date version published** XX

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 in *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007; and is related to the material in the *Teaching and Learning Guide for Technology*, Ministry of Education at <http://seniorsecondary.tki.org.nz>.

Further information can be found at <http://www.technology.tki.org.nz/>.

Appropriate reference information is available in *Safety and Technology Education: A Guidance Manual for New Zealand Schools*, Ministry of Education at <http://technology.tki.org.nz/Technology-in-the-NZC/Safety-in-Technology-Education-revised-2017>, and the Health and Safety at Work Act 2015.

This standard is also derived from *Te Marautanga o Aotearoa*. For details of *Te Marautanga o Aotearoa* outcomes 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 user
- 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 user.

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, webpages, dashboards, program interfaces)
- dynamically linking data between the database and a front-end display
- applying data access permissions as appropriate to the outcome.

5 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

Quality Assurance

- 1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.
- 2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference

0233