Years 9–10 standard elaborations — Australian Curriculum v9.0: Digital Technologies

Purpose

The standards elaborations (SEs) support teachers to connect curriculum to evidence in assessment so that students are assessed on what they have had the opportunity to learn. The SEs can be used to:

- make consistent and comparable judgments, on a five-point scale, about the evidence of learning in a folio of student work across a year/band
- develop task-specific standards (or marking guides) for individual assessment tasks
- quality assure planning documents to ensure coverage of the achievement standard across a year/band.

Structure

The SEs have been developed using the Australian Curriculum achievement standard. The achievement standard for Digital Technologies describes what students are expected to know and be able to do at the end of each year. Teachers use the SEs during and at the end of a teaching period to make on-balance judgments about the qualities in student work that demonstrate the depth and breadth of their learning.

In Queensland, the achievement standard represents the C standard — a sound level of knowledge and understanding of the content, and application of skills. The SEs are presented in a matrix where the discernible differences and/or degrees of quality between each performance level are highlighted. Teachers match these discernible differences and/or degrees of quality to characteristics of student work to make judgments across a five-point scale.

Years 9–10 Australian Curriculum: Digital Technologies achievement standard

By the end of Year 10 students develop and modify innovative digital solutions, decompose real-world problems, and critically evaluate alternative solutions against stakeholder elicited user stories. Students acquire, interpret and model complex data with databases and represent documents as content, structure and presentation. They design and validate algorithms and implement them, including in an object-oriented programming language. Students explain how digital systems manage, control and secure access to data; and model cyber security threats and explore a vulnerability. They use advanced features of digital tools to create interactive content, and to plan, collaborate on, and manage agile projects. Students apply privacy principles to manage digital footprints.

Source: Australian Curriculum, Assessment and Reporting Authority (ACARA), *Australian Curriculum Version 9.0 Digital Technologies for Foundation–10*
https://v9.australiancurriculum.edu.au/f-10-curriculum/learning-areas/digital-technologies/year-10?view=quick&detailed-content-descriptions=0&hide-ccp=0&hide-gc=0&side-by-side=1&strands-start-index=0&subjects-start-index=0

Years 9–10 Digital Technologies standard elaborations

		A	B	C	D	E
		The folio of student work contains evidence of the following:				
Knowledge and understanding	**Digital systems**	considered explanation of how digital systems manage, control and secure access to data	detailed explanation of how digital systems manage, control and secure access to data	explanation of how digital systems manage, control and secure access to data	description of how digital systems manage, control and/or secure access to data	statement/s about data management, control and/or secure access to data
	Data representation	reasoned representation of documents as content, structure and presentation	effective representation of documents as content, structure and presentation	representation of documents as content, structure and presentation	partial representation of documents as content, structure and/or presentation	directed representation of documents as content, structure and/or presentation

		A	B	C	D	E
Processes and production skills	**Acquiring, managing and analysing data**	proficient acquisition, interpretation and modelling of complex data with databases	effective acquisition, interpretation and modelling of complex data with databases	acquisition, interpretation and modelling of complex data with databases	partial acquisition, interpretation and/or modelling of complex data with databases	fragmented acquisition, interpretation and/or modelling of data with databases
	Investigating and defining	reasoned decomposition of real-world problems	effective decomposition of real-world problems	decomposition of real-world problems	partial decomposition of real-world problems	statement/s about real-world problems
	Generating and designing	considered design and validation of algorithms	effective design and validation of algorithms	design and validation of algorithms	guided design and validation of algorithms	directed design and/or validation of algorithms
		considered development and modification of innovative digital solutions	effective development and modification of innovative digital solutions	development and modification of innovative digital solutions	partial development and modification of innovative digital solutions	fragmented development and/or modification of digital solutions
	Producing and implementing	proficient implementation of algorithms, including in an object-oriented programming language	effective implementation of algorithms, including in an object-oriented programming language	implementation of algorithms, including in an object-oriented programming language	partial implementation of algorithms, including in an object-oriented programming language	directed implementation of algorithms

		A	B	C	D	E
	Evaluating	discerning critical evaluation of alternative solutions against stakeholder elicited user stories	effective critical evaluation of alternative solutions against stakeholder elicited user stories	critical evaluation of alternative solutions against stakeholder elicited user stories	partial evaluation of alternative solutions against stakeholder elicited user stories	identification of alternative solutions against stakeholder elicited user stories
	Collaborating and managing	proficient use of advanced features of digital tools to: • create interactive content • plan, collaborate on and manage agile projects	effective use of advanced features of digital tools to: • create interactive content • plan, collaborate on and manage agile projects	use of advanced features of digital tools to: • create interactive content • plan, collaborate on and manage agile projects	variable use of advanced features of digital tools to partially: • create interactive content • plan, collaborate on and/or manage agile projects	directed use of digital tools
	Privacy and security	discerning modelling of cyber security threats and exploration of a vulnerability	plausible modelling of cyber security threats and exploration of a vulnerability	modelling of cyber security threats and exploration of a vulnerability	partial modelling of cyber security threats and/or exploration of a vulnerability	statement/s about cyber security threats
		proficient application of privacy principles to manage digital footprints.	informed application of privacy principles to manage digital footprints.	application of privacy principles to manage digital footprints.	partial application of privacy principles to manage digital footprints.	directed application of privacy principles to manage digital footprints.

Key	shading emphasises the qualities that discriminate between the A–E descriptors