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| 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.

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| 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 |
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|  | | 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 |
| 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 |
| 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. |

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

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