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| Years 9–10 standard elaborations —  Australian Curriculum v9.0: Design and 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 Design and 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: Design and Technologies achievement standard |
| By the end of Year 10 students explain how people consider factors that impact on design decisions and the technologies used to design and produce products, services and environments for sustainable living. They explain the contribution of innovation, enterprise skills and emerging technologies to global preferred futures. For one or more of the technologies contexts, students explain the features of technologies and their appropriateness for purpose, and create designed solutions based on an analysis of needs or opportunities. Students create, adapt and refine design ideas, processes and solutions and justify their decisions against developed design criteria that include sustainability. They communicate design ideas, processes and solutions to a range of audiences, including using digital tools. Students independently and collaboratively develop and apply production and project management plans, adjusting processes when necessary. They select and use technologies skilfully and safely to produce designed solutions. |
| Source: Australian Curriculum, Assessment and Reporting Authority (ACARA), *Australian Curriculum Version 9.0 Design and Technologies for Foundation–10* <https://v9.australiancurriculum.edu.au/f-10-curriculum/learning-areas/design-and-technologies/year-9?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 Design and 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 | Technologies and society | discerning explanation of how people consider factors that impact on design decisions and the technologies used to design and produce products, services and environments for sustainable living | detailed explanation of how people consider factors that impact on design decisions and the technologies used to design and produce products, services and environments for sustainable living | explanation of how people consider factors that impact on design decisions and the technologies used to design and produce products, services and environments for sustainable living | description of how people consider factors that impact on design decisions and the technologies used to design and produce products, services and environments for sustainable living | statement/s about factors that impact on design decisions and/or the technologies used to design and produce designed solutions |
| discerning explanation of the contribution of innovation, enterprise skills and emerging technologies to global preferred futures | detailed explanation of the contribution of innovation, enterprise skills and emerging technologies to global preferred futures | explanation of the contribution of innovation, enterprise skills and emerging technologies to global preferred futures | description of the contribution of innovation, enterprise skills and emerging technologies to global preferred futures | statement/s about innovation, enterprise skills, and/or emerging technologies |
| Technologies contexts | discerning explanation of the features of technologies and their appropriateness for purpose for one or more of the prescribed technologies contexts | detailed explanation of the features of technologies and their appropriateness for purpose for one or more of the prescribed technologies contexts | explanation of the features of technologies and their appropriateness for purpose for one or more of the prescribed technologies contexts | description of the features of technologies and their appropriateness for purpose for one or more of the prescribed technologies contexts | statement/s about the features of technologies and/or their appropriateness for purpose |
| Processes and production skills | Investigating and defining | proficient analysis of needs or opportunities for one or more of the prescribed technologies contexts | effective analysis of needs or opportunities for one or more of the prescribed technologies contexts | analysis of needs or opportunities for one or more of the prescribed technologies contexts | superficial analysis of needs or opportunities for one or more of the prescribed technologies contexts | identification of needs or opportunities for one or more of the prescribed technologies contexts |
| Generating and designing | * development of reasoned design criteria that include sustainability * proficient creation, adaptation and refinement of comprehensive design ideas, processes and solutions   based on analysis of needs or opportunities | * development of effective design criteria that include sustainability * informed creation, adaptation and refinement of effective design ideas, processes and solutions   based on analysis of needs or opportunities | * development of design criteria that include sustainability * creation, adaptation and refinement of design ideas, processes and solutions   based on analysis of needs or opportunities | * guided development of design criteria that include sustainability * partial creation, adaptation and refinement of simple design ideas, processes and solutions   based on analysis of needs or opportunities | * directed development of design criteria that include sustainability * fragmented creation, adaptation and refinement of basic design ideas, processes and solutions   based on needs or opportunities |
| communication of comprehensive design ideas, processes and solutions to a range of audiences, including using digital tools | communication of effective design ideas, processes and solutions to a range of audiences, including using digital tools | communication of design ideas, processes and solutions to a range of audiences, including using digital tools | communication of superficial design ideas, processes and solutions to a range of audiences, including using digital tools | communication of fragmented design ideas, processes and solutions |
| Producing and implementing | purposeful selection and use of technologies to proficiently, skilfully and safely produce designed solutions | effective selection and use of technologies to effectively, skilfully and safely produce designed solutions | selection and use of technologies to skilfully and safely produce designed solutions | simple selection and use of technologies to safely produce simple designed solutions | basic selection and use of technologies to safely produce basic solutions |
| Evaluating | discerning justification of decisions against developed design criteria that include sustainability | logical justification of decisions against developed design criteria that include sustainability | justification of decisions against developed design criteria that include sustainability | partial justification of decisions against aspects of developed design criteria that include sustainability | statement/s about design decisions |
| Collaborating and managing | independent and collaborative:   * proficient development of   + production plans   + project management plans * proficient application of   + production plans   + project management plans,   adjusting processes when necessary. | independent and collaborative:   * effective development of   + production plans   + project management plans * effective application of   + production plans   + project management plans,   adjusting processes when necessary. | independent and collaborative development and application of production and project management plans, adjusting processes when necessary. | independent and collaborative:   * partial development of   + production plans   + project management plans * partial application of   + production plans   + project management plans,   adjusting processes when necessary. | independent and/or collaborative:   * fragmented development of   + production plans   + project management plans * fragmented application of   + production plans   + project management plans,   adjusting processes when necessary. |

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

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