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| Years 3–4 standard elaborations — Australian Curriculum v9.0: 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 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.

In Years 3–4 the Learning area achievement standard may be used to assess within and across the Technologies subjects.

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| **Years 3–4 Australian Curriculum: Technologies achievement standard** |
| By the end of Year 4 students describe how people design products, services and environments to meet the needs of people, including sustainability. They process and represent data for different purposes, follow and describe simple algorithms involving branching and iteration, and implement them as visual programs. For each of the 2 prescribed technologies contexts they describe the features and uses of technologies and create designed solutions. Students select design ideas against design criteria. Students securely access and use digital systems and their peripherals for a range of purposes, including transmitting data. They communicate design ideas using models and drawings including annotations and symbols. Students plan and sequence steps and use technologies and techniques to safely produce designed solutions. They use the core features of common digital tools to plan, create, locate and share content, and to collaborate, following agreed behaviours. Students identify their personal data stored online and its risks. |
| Source: Australian Curriculum, Assessment and Reporting Authority (ACARA), *Australian Curriculum Version 9.0 Technologies for Foundation–10* <https://v9.australiancurriculum.edu.au/f-10-curriculum/learning-areas/design-and-technologies_digital-technologies/year-3?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 3–4 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 | thorough description of how people design products, services and environments to meet the needs of people, including sustainability | detailed description of how people design products, services and environments to meet the needs of people, including sustainability | description of how people design products, services and environments to meet the needs of people, including sustainability | identification of how people design products, services and environments to meet the needs of people, including sustainability | identification of products, services and/or environments |
| Technologies contexts | thorough description of the features and uses of technologies for each of the 2 prescribed technologies contexts:* Engineering principles and systems; Materials and technologies specialisations
* Food and fibre production; Food specialisations
 | detailed description of the features and uses of technologies for each of the 2 prescribed technologies contexts:* Engineering principles and systems; Materials and technologies specialisations
* Food and fibre production; Food specialisations
 | description of the features and uses of technologies for each of the 2 prescribed technologies contexts:* Engineering principles and systems; Materials and technologies specialisations
* Food and fibre production; Food specialisations
 | identification of the features and uses of technologies for each of the 2 prescribed technologies contexts:* Engineering principles and systems; Materials and technologies specialisations
* Food and fibre production; Food specialisations
 | statement/s about the features and/or uses of technologies for one or more of the 2 prescribed technologies contexts:* Engineering principles and systems; Materials and technologies specialisations
* Food and fibre production; Food specialisations
 |
| Digital systems | secure access and proficient use of digital systems and their peripherals for a range of purposes, including transmitting data | secure access and effective use of digital systems and their peripherals for a range of purposes, including transmitting data | secure access and use of digital systems and their peripherals for a range of purposes, including transmitting data | secure access and guided use of digital systems and their peripherals | secure access and directed use of digital systems |
| Data representation | proficient:* processing of data for different purposes
* representation of data for different purposes
 | effective:* processing of data for different purposes
* representation of data for different purposes
 | * processing of data for different purposes
* representation of data for different purposes
 | * guided processing of data for different purposes
* partial representation of data for different purposes
 | * directed processing of data for different purposes
* fragmented representation of data for different purposes
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|  | Investigating and defining\* |  |  |  |  |  |
| Processes and production skills | Generating and designing | following and purposefully describing simple algorithms involving branching and iteration | following and effectively describing simple algorithms involving branching and iteration | following and describing simple algorithms involving branching and iteration | following and identifying simple algorithms involving branching and/or iteration | directed following of simple algorithms |
| communication of considered design ideas using models and drawings including annotations and symbols | communication of effective design ideas using models and drawings including annotations and symbols | communication of design ideas using models and drawings including annotations and symbols | communication of simple design ideas using models and/or drawings that may include annotations and symbols | statement/s about design ideas |
| Producing and implementing | proficient implementation of simple algorithms involving branching and iteration as visual programs | effective implementation of simple algorithms involving branching and iteration as visual programs | implementation of simple algorithms involving branching and iteration as visual programs | guided implementation of simple algorithms involving branching and/or iteration as visual programs | directed implementation of simple algorithms |
| creation of considered designed solutions for each of the 2 prescribed technologies contexts:* Engineering principles and systems; Materials and technologies specialisations
* Food and fibre production; Food specialisations
 | creation of effective designed solutions for each of the 2 prescribed technologies contexts:* Engineering principles and systems; Materials and technologies specialisations
* Food and fibre production; Food specialisations
 | creation of designed solutions for each of the 2 prescribed technologies contexts:* Engineering principles and systems; Materials and technologies specialisations
* Food and fibre production; Food specialisations
 | creation of partial designed solutions for each of the 2 prescribed technologies contexts:* Engineering principles and systems; Materials and technologies specialisations
* Food and fibre production; Food specialisations
 | creation of fragmented designed solutions for one or more of the 2 prescribed technologies contexts:* Engineering principles and systems; Materials and technologies specialisations
* Food and fibre production; Food specialisations
 |
| purposeful use of technologies and techniques to safely produce designed solutions | effective use of technologies and techniques to safely produce designed solutions | use of technologies and techniques to safely produce designed solutions | guided use of technologies and techniques to safely produce designed solutions | directed use of technologies and techniques to safely produce designed solutions |
| **Evaluating** | considered selection of design ideas against design criteria | informed selection of design ideas against design criteria | selection of design ideas against design criteria | variable selection of design ideas against design criteria | fragmented selection of design ideas |
| **Collaborating and managing** | comprehensive planning and sequencing of steps | detailed planning and sequencing of steps | planning and sequencing of steps | partial planning and sequencing of steps | fragmented planning and sequencing of steps |
| proficient use of the core features of common digital tools to:* plan, create, locate and share content
* collaborate following agreed behaviours
 | effective use of the core features of common digital tools to:* plan, create, locate and share content
* collaborate following agreed behaviours
 | use of the core features of common digital tools to:* plan, create, locate and share content
* collaborate following agreed behaviours
 | variable use of the core features of common digital tools to partially:* plan, create, locate and share content
* collaborate following agreed behaviours
 | directed use of the core features of common digital tools |
| **Privacy and security** | thorough identification of their personal data stored online and its risks. | informed identification of their personal data stored online and its risks. | identification of their personal data stored online and its risks. | guided identification of their personal data stored online and/or its risks. | directed identification of their personal data stored online. |

\* sub-strand assessed within Technologies contexts for this level

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

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