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|  | Prep to Year 2 standard elaborations — Australian Curriculum:  Design and Technologies |

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| Purpose | The standard elaborations (SEs) provide additional clarity when using the Australian Curriculum achievement standard to make judgments on a five‑point scale. They can be used as a tool for:   * making consistent and comparable judgments about the evidence of learning in a folio of student work * developing task-specific standards for individual assessment tasks. |
| Structure | The SEs are developed using the **Australian Curriculum achievement standard**. The Design and Technologies achievement standard describes the learning expected of students at each band. Teachers use the achievement standard during and at the end of a period of teaching to make on‑balance judgments about the quality of learning students demonstrate.  In Queensland the Prep[[1]](#footnote-2) to Year 2 achievement standard represents the **working with (WW) standard** — a sound level of knowledge and understanding of the content, and application of skills. The SEs are presented in a **matrix**. The discernible differences or degrees of quality associated with the five-point scale are highlighted to identify the characteristics of student work on which teacher judgments are made. Terms are described in the Notes section following the matrix. |
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| Prep to Year 2 Australian Curriculum: Design and Technologies achievement standard | |
| By the end of Year 2, students describe the purpose of familiar products, services and environments and how they meet the needs of users and affect others and environments. They identify the features and uses of technologies for each of the prescribed technologies contexts.  With guidance, students create designed solutions for each of the prescribed technologies contexts. They describe given needs or opportunities. Students create and evaluate their ideas and designed solutions based on personal preferences. They communicate design ideas for their designed products, services and environments using modelling and simple drawings. Following sequenced steps, students demonstrate safe use of tools and equipment when producing designed solutions. | |
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| **Source** | Australian Curriculum, Assessment and Reporting Authority (ACARA), *Australian Curriculum Version 8 Design and Technologies for Foundation–10*, [www.australiancurriculum.edu.au/f-10-curriculum/technologies/design-and-technologies](https://www.australiancurriculum.edu.au/f-10-curriculum/technologies/design-and-technologies) |

## Prep to Year 2 Design and Technologies standard elaborations

|  | | Applying (AP) | Making connections (MC) | Working with (WW) | Exploring (EX) | Becoming aware (BA) |
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|  | | The folio of a student’s work has the following characteristics: | | | | |
| Knowledge and understanding | Technologies and society | clear and informed description of the purpose of familiar products, services and environments and how they meet the needs of users and affect others and environments | informed description of the purpose of familiar products, services and environments and how they meet the needs of users and affect others and environments | description of the purpose of familiar products, services and environments and how they meet the needs of users and affect others and environments | guided description of the purpose of familiar products, services and environments and how they meet the needs of users and affect others and environments | directed identification of:   * the purpose of familiar products, services and environments * the needs of users, others and environments |
| Technologies contexts | identification and clear description of the features and uses of technologies for each of the prescribed technologies contexts | identification and description of the features and uses of technologies for each of the prescribed technologies contexts | identification of the features and uses of technologies for each of the prescribed technologies contexts | guided identification of some of the features and uses of technologies for each of the prescribed technologies contexts | directed identification of some of the features of technologies for each of the prescribed technologies contexts |
| Processes and production skills | Investigating and defining | clear and informed description of given needs or opportunities | informed description of given needs or opportunities | description of given needs or opportunities | guided description of given needs or opportunities | directed statements about given needs or opportunities |
| Generating and designing; evaluating | considered creation and evaluation of their ideas and designed solutions based on personal preferences | informed creation and evaluation of their ideas and designed solutions based on personal preferences | creation and evaluation of their ideas and designed solutions based on personal preferences | guided creation and explanation of their ideas and designed solutions based on personal preferences | directed creation and explanation of their ideas and designed solutions based on personal preferences |
| comprehensive and effective communication of design ideas for their designed products, services and environments using modelling and simple drawings | effective communication of design ideas for their designed products, services and environments using modelling and simple drawings | communication of design ideas for their designed products, services and environments using modelling and simple drawings | guided communication of design ideas for their designed products, services and environments using aspects of modelling and simple drawings | directed communication of design ideas for their designed products, services and environments |
| Processes and production skills | Producing and implementing;  collaborating and managing | proficient production of designed solutions:   * demonstrating safe use of tools and equipment * following a sequence of steps | effective production of designed solutions:   * demonstrating safe use of tools and equipment * following a sequence of steps | production of designed solutions:   * demonstrating safe use of tools and equipment * following a sequence of steps | guided production of designed solutions:   * demonstrating safe use of tools and equipment * following a sequence of steps | directed production of designed solutions:   * demonstrating safe use of tools and equipment * following steps |

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| Key | | shading emphasises the qualities that discriminate between the AP–BA descriptors |
|  | **AP**  **MC**  **WW**  **EX**  BA | applies the curriculum content; demonstrates a thorough understanding of the required knowledge; demonstrates a high level of skill that can be transferred to new situations  makes connections using the curriculum content; demonstrates a clear understanding of the required knowledge; applies a high level of skill in situations familiar to them, and is beginning to transfer skills to new situations  works with the curriculum content; demonstrates understanding of the required knowledge; applies skills in situations familiar to them  exploring the curriculum content; demonstrates understanding of aspects of the required knowledge; uses a varying level of skills in situations familiar to them  becoming aware of the curriculum content; demonstrates a basic understanding of aspects of required knowledge; beginning to use skills in situations familiar to them |

## Notes

### Australian Curriculum common dimensions

The SEs describe the qualities of achievement in the two dimensions common to all Australian Curriculum learning area achievement standards — understanding and skills.

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| Dimension | Description |
| understanding | the concepts underpinning and connecting knowledge in a learning area, related to a student’s ability to appropriately select and apply knowledge to solve problems in that learning area |
| skills | the specific techniques, strategies and processes in a learning area |

### Terms used in Prep to Year 2 Design and Technologies SEs

These terms clarify the descriptors in the Prep to Year 2 Design and Technologies SEs. Definitions are drawn from the ACARA Australian Curriculum Technologies glossary ([www.australiancurriculum.edu.au/f-10-curriculum/technologies/glossary](http://www.australiancurriculum.edu.au/f-10-curriculum/technologies/glossary)) and from other sources to ensure consistent understanding.

| Term | Description |
| --- | --- |
| apply; applying | use, utilise or employ in a particular situation |
| aspects | particular parts or features |
| clear | easy to perceive, understand, or interpret; without ambiguity |
| collaborating and managing ([design process](#design_processes)) | students learn to work collaboratively and to manage time and other resources to effectively create designed solutions;  in Prep to Year 2, students:   * work individually and collaboratively * sequence steps for making designed solutions |
| communicate; communication | conveying information or ideas to others through appropriate representations, text types and modes;  in Design and Technologies, communicate means sharing of information and design ideas; includes using [graphical representation techniques](#graphical_representation_techniques) (e.g. drawing, sketching and modelling) to create innovative ideas that focus on high-quality [designed solutions](#designedsolutions) |
| comprehensive | detailed and thorough, including all that is relevant |
| considered | thought about deliberately with a purpose;  see [well-considered](#well_considered);  in Technologies, *considered* includes [informed](#informed) |
| constructed environments | [environments](#environment) developed, built and/or made by people for human and animal activity, including buildings, streets, gardens, bridges and parks;  include [natural environments](#natural_environments) after they have been changed by people for a purpose |
| creation; create; creating | putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing;  creating requires users to put parts together in a new way or synthesise parts into something new and different a new form or product;  in Design and Technologies, creating involves bringing a solution (product, environment or service) into existence through the [design process](#design_processes) |
| demonstrate | give a practical exhibition or explanation |
| description; describe | give an account of characteristics or features |
| design process ([processes and productions skills](#proccesses_and_production_skills) strand) | in Design and Technologies, *design process* means a process to create a [designed solution](#designedsolutions) that considers social, cultural and environmental factors and typically involves:   * [investigating and defining](#investigating_and_defining) * [generating and designing](#generating_and_designing) * [producing and implementing](#producing_and_implementing) * [evaluating](#evaluating) * [collaborating and managing](#collaborating_and_managing);   see also [technologies processes](#technologies_processes) |
| designed solutions | the products, services or environments that have been created for a specific purpose or intention as a result of design thinking, [design processes](#design_processes) and production processes;  in Prep to Year 2, students:   * create designed solutions for the prescribe [technologies contexts](#technologies_contexts) * produce a range of types of designed solutions (products, services and environments). This may occur through integrated learning * this may occur through integrated learning |
| detailed | meticulous; including many of the parts |
| digital environments | [environments](#environment) that are entirely presented or experienced with digital technologies; can be a situation, a sphere of activity, or a simulated place (e.g. a social network that provides a digital environment for communicating with friends, software that provides a digital environment for editing photographs) |
| directed | following the instructions of the facilitator |
| effective | meeting the assigned purpose in a considered and/or efficient manner to produce a desired or intended result |
| environment | one type of designed solution;  a place or space in which [technologies processes](#technologies_processes) operate and/or one of the outputs of technologies processes;  environments can be [natural](#natural_environments), [managed](#managed_environments), [constructed](#constructed) or [digital](#digital_environments) |
| evaluate; evaluating ([design process](#design_processes)) | examine and judge the merit or significance of something;  students evaluate and make judgments throughout a design process and about the quality and effectiveness of their designed solutions and those of others;  in Prep to Year 2, students use personal preferences to evaluate the success of design ideas, processes and solutions, including their care for environment |
| explanation; explain | provide additional information that demonstrates understanding of reasoning and/or application |
| features | a distinctive attribute, characteristic, property or quality of something (e.g. an object, material, living thing, system or event) |
| generating and designing ([design process](#design_processes)) | students develop and communicate ideas for a range of audiences;  generating creative and innovative ideas involves thinking differently; it entails proposing new approaches to existing problems and identifying new design opportunities considering preferred futures;  generating and developing ideas involves identifying various competing factors that may influence and dictate the focus of the idea  in Prep to Year 2, students generate, develop and record design ideas through describing, drawing and modelling |
| graphical representation techniques | techniques used to communicate ideas and plans (e.g. sketching, drawing, modelling, making patterns, technical drawing, computer-aided drawing);  in Prep to Year 2, students:   * draw, model and explain design ideas * label drawings * draw objects as two-dimensional images from different views * draw products and simple environments and verbalise design ideas |
| guided; guidance | visual and/or verbal prompts to facilitate or support independent action |
| identification; identify | to establish or indicate who or what someone or something is |
| informed | having relevant knowledge; being conversant with the topic;  in Technologies, *informed* refers to the underpinning knowledge, understanding and skills of [processes and production skills](#production_processes) when solving problems and creating solutions |
| investigating and defining ([design process](#design_processes)) | students critique, explore and investigate needs, opportunities and information;  in Prep to Year 2, students:   * explore needs and opportunities for designing * explore the technologies needed to realise designed solutions |
| managed environments | [environments](#environment) coordinated by humans (e.g. farms, forests, marine parks, waterways, wetlands, storage facilities) |
| natural environments | [environments](#environment) in which humans do not make significant interventions (e.g. oceans, natural woodlands, national parks) |
| prescribed technologies contexts | see [technologies contexts](#technologies_contexts) |
| processes and production skills | the skills needed to create [designed solutions](#designedsolutions);  see also [technologies processes](#technologies_processes) |
| producing and implementing ([design process](#design_processes)) | actively realising (making) designed solutions using appropriate resources and means of production;  in Prep to Year 2, students use materials, components, tools, equipment and techniques to safely make designed solutions |
| product; products | one type of [designed solution](#designedsolutions);  one of the outputs of [technologies processes](#technologies_processes), the end result of processes and production; *products* are the tangible end results of natural, human, mechanical, manufacturing, electronic or digital processes to meet a need or want |
| production processes | in Design and Technologies, production processes are the technologies context‑specific processes used to transform technologies into products, services or environments (e.g. the steps used for producing a product) |
| proficient | competent or skilled in doing or using something;  in Design and Technologies, *proficient* means using knowledge and understanding of technologies in a skilful and adept application to produce high-quality design solutions |
| service | one type of [designed solution](#designedsolutions);  one of the outputs of [technologies processes](#technologies_processes), the end result of processes and production;  services are the less tangible outcome (compared to [products](#products)) of technologies processes to meet a need or want; they may involve development or maintenance of a system and include catering, cloud computing (software as a service), communication, transportation and water management;  services can be communicated by charts, diagrams, models, posters and procedures |
| statement | a sentence or assertion |
| sustainable; sustainability | supports the needs of the present without compromising the ability of future generations to support their needs |
| systems | the structure, properties, behaviour and interactivity of people and components (inputs, processes and outputs) within and between [natural](#natural_environments), [managed](#managed_environments), [constructed](#constructed) and [digital](#digital_environments) environments |
| technologies and society  (knowledge and understanding strand) | technologies and society focuses on how people use and develop technologies taking into account social, economic, environmental, ethical, legal, aesthetic and functional factors and the impact of technologies on individuals; families; local, regional and global communities; the economy; and the environment − now and into the future;  in Prep to Year 2, students:   * identify how people design and produce familiar products, services and environments * consider how sustainability to meet personal and local community needs |
| technologies contexts  (knowledge and understanding strand) | in Design and Technologies, these are the contexts that students can focus on when using processes and production skills to design and produce products, services and environments;  in Prep to Year 2, the prescribed technologies contexts are:   * engineering principles and systems * food and fibre production (includes food specialisations) * materials and technologies specialisations |
| technologies processes  ([processes and productions skills](#proccesses_and_production_skills) strand) | the processes that allow the creation of a solution for an audience (end user, client or consumer) and involve the purposeful use of [technologies](#technologies) and other resources and appropriate consideration of impact when creating and using solutions;  typically require critical and creative thinking such as: computational, design or systems thinking  in Design and Technologies, *technologies processes* involve:   * [design processes](#design_processes) * technologies-specific [production processes](#production_processes) |
| technologies | the materials, data, systems, components, tools and equipment used to create solutions for identified needs and opportunities, and the knowledge, understanding and skills used by people involved in the selection and use of these |
| use | to operate or put into effect |

1. Prep in Queensland is the Foundation Year of the Australian Curriculum and refers to the year before Year 1. Children beginning Prep in January must be five years of age by 30 June. [↑](#footnote-ref-2)