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| Years 9–10 band Design and Technologies Curriculum and assessment plan  [Insert school name, implementation year] |

Use this template to plan an overview or summary of the teaching, learning and assessment for a band in the Australian Curriculum: Design and Technologies. For planning advice, refer to the *Planning for teaching, learning and assessment* document available on the Planning tab for each learning area at [www.qcaa.qld.edu.au/p-10/aciq/version-9/learning-areas](http://www.qcaa.qld.edu.au/p-10/aciq/version-9/learning-areas).

**How to use this template:** Type information into the fields (yellow shading). When the plan is complete, delete the highlighted instructions (blue shading). To do so, select the instruction text, click the **Home tab > Styles dropdown > Clear All/Clear Formatting >** text will revert to Normal style and you can delete the text.

| Level description | Context and cohort considerations (if applicable) |
| --- | --- |
| By the end of Year 10 students should have had the opportunity to design and produce at least 4 designed solutions focused on one or more of the 4 technologies contexts:   * Engineering principles and systems * Food and fibre production * Food specialisations * Materials and technologies specialisations.   Students should have opportunities to experience creating designed solutions for products, services and environments.  Students use design and technologies knowledge and understanding, processes and production skills and design thinking to produce designed solutions for identified needs or opportunities of relevance to individuals and local, regional or global communities. They work independently and collaboratively. Problem-solving activities acknowledge the complexities of contemporary life and make connections to related specialised occupations and further study. Increasingly, study has a global perspective, with opportunities to understand the complex interdependencies involved in the development of technologies and enterprises.  Students specifically focus on preferred futures, taking into account ethics; legal issues; social values; and economic, environmental and social sustainability factors; and use strategies such as life cycle thinking. They use critical thinking, creativity, innovation and enterprise skills with increasing confidence, independence and collaboration. Students analyse data, evaluate design ideas and technologies, respond to feedback, and evaluate design processes used to inform designed solutions for preferred futures.  Using a range of technologies including a variety of graphical representation techniques to communicate, students generate and represent original ideas and production plans in 2-dimensional and 3-dimensional representations. These techniques will be specific to the technologies context and may include scale, perspective, orthogonal and production drawings with sectional and exploded views. Students produce rendered, illustrated views for marketing and use graphic visualisation software to produce dynamic views of design ideas and designed solutions.  Students identify the steps involved in planning the production of designed solutions. They develop detailed project management plans, incorporating elements such as sequenced time, cost and action plans, to manage design tasks safely. Students apply management plans, making adjustments when necessary, to successfully complete design tasks. They identify and establish safety procedures that minimise risk and manage projects with safety and efficiency in mind, maintaining safety standards and management procedures to ensure success. | Describe the context and cohort.  Consider the following to make informed professional decisions during the planning process:   * + relevant student data and information, e.g. achievement data   + available resources, e.g. timetabling   + school and sector priorities.   [Insert context and cohort considerations] |

**Note:** Insert/delete rows/columns, as required, to provide an overview of the teaching, learning and assessment sequence across the band.

| Unit 1 — [Insert unit title] | Unit 2 — [Insert unit title] | Unit 3 — [Insert unit title] | Unit 4 — [Insert unit title] |
| --- | --- | --- | --- |
| Duration: [Insert semester, term and/or weeks] | Duration: [Insert semester, term and/or weeks] | Duration: [Insert semester, term and/or weeks] | Duration: [Insert semester, term and/or weeks] |
| [Insert unit description and learning focus] | [Insert unit description and learning focus] | [Insert unit description and learning focus] | [Insert unit description and learning focus] |

**Note:**

Adjust the table to reflect the number of units you will offer.

Highlight the aspects of the achievement standard that will be assessed within each unit.

|  | Unit 1 | | Unit 2 | | Unit 3 | | Unit 4 | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Assessment — [Insert assessment title] | Timing | Assessment — [Insert assessment title] | Timing | Assessment — [Insert assessment title] | Timing | Assessment — [Insert assessment title] | Timing |
| Assessment | [Insert concise description of assessment]  [Insert technique]  [Insert mode, if applicable]  [Insert conditions] | [Insert week/s or date/s] | [Insert concise description of assessment]  [Insert technique]  [Insert mode, if applicable]  [Insert conditions] | [Insert week/s or date/s] | [Insert concise description of assessment]  [Insert technique]  [Insert mode, if applicable]  [Insert conditions] | [Insert week/s or date/s] | [Insert concise description of assessment]  [Insert technique]  [Insert mode, if applicable]  [Insert conditions] | [Insert week/s or date/s] |
| 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. | | 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. | | 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. | | 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. | |
| Moderation | [Insert moderation details, including when moderation will occur and how it will be conducted] | | [Insert moderation details, including when moderation will occur and how it will be conducted] | | [Insert moderation details, including when moderation will occur and how it will be conducted] | | [Insert moderation details, including when moderation will occur and how it will be conducted] | |

**Note:** Adjust the table to reflect the number of units you will offer. Check or uncheck the columns as appropriate for each unit.

| Content descriptions | Units | | | | Content descriptions | Units | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Knowledge and understanding | 1 | 2 | 3 | 4 | Processes and production skills | 1 | 2 | 3 | 4 |
| **Technologies and society**  analyse how people in design and technologies occupations consider ethical, security and sustainability factors to innovate and improve products, services and environments  AC9TDE10K01 |  |  |  |  | **Investigating and defining**  analyse needs or opportunities for designing; develop design briefs; and investigate, analyse and select materials, systems, components, tools and equipment to create designed solutions  AC9TDE10P01 |  |  |  |  |
| analyse the impact of innovation, enterprise and emerging technologies on designed solutions for global preferred futures  AC9TDE10K02 |  |  |  |  | **Generating and designing**  apply innovation and enterprise skills to generate, test, iterate and communicate design ideas, processes and solutions, including using digital tools AC9TDE10P02 |  |  |  |  |
| **Technologies context: Engineering principles and systems**  analyse and make judgements on how the characteristics and properties of materials are combined with force, motion and energy to control engineered systems  AC9TDE10K03 |  |  |  |  | **Producing and implementing**  **select, justify, test and use suitable technologies, skills and processes, and apply safety procedures to safely make designed solutions**  **AC9TDE10P03** |  |  |  |  |
| **Technologies context: Food and fibre production**  analyse and make judgements on the ethical, secure and sustainable production and marketing of food and fibre enterprises  AC9TDE10K04 |  |  |  |  | **Evaluating**  **develop design criteria independently including sustainability to evaluate design ideas, processes and solutions**  **AC9TDE10P04** |  |  |  |  |
| **Technologies context: Food specialisations**  analyse and make judgements on how the sensory and functional properties of food influence the design and preparation of sustainable food solutions for healthy eating  AC9TDE10K05 |  |  |  |  | **Collaborating and managing**  **develop project plans for intended purposes and audiences to individually and collaboratively manage projects, taking into consideration time, cost, risk, processes and production of designed solutions**  **AC9TDE10P05** |  |  |  |  |
| **Technologies context: Materials and technologies specialisations**  analyse and make judgements on how characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions  AC9TDE10K06 |  |  |  |  |  | | | | |

**Note:** Adjust the table to reflect the number of units you will offer. Check or uncheck the columns as appropriate for each unit.

| General capabilities | Units | | | |  | Cross-curriculum priorities | Units | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |  |  | 1 | 2 | 3 | 4 |
| Critical and creative thinking |  |  |  |  |  | Aboriginal and Torres Strait Islander histories and cultures |  |  |  |  |
| Digital literacy |  |  |  |  |  | Asia and Australia’s engagement with Asia |  |  |  |  |
| Ethical understanding |  |  |  |  |  | Sustainability |  |  |  |  |
| Intercultural understanding |  |  |  |  |
| Literacy |  |  |  |  |
| Numeracy |  |  |  |  |
| Personal and social capability |  |  |  |  |

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