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| Previous level’s achievement standard as a starting point of comparison Previous level’s achievement standard as a starting point of comparison **CURRICULUM AREA – Technologies/Design Technologies** |
| **Context:** Students respond to a design brief to construct a time-measuring device using timber as its main feature. The technologies context in the teaching and learning plan is Materials and technologies specialisations.**Content Descriptions:*** Analyse ways to create designed solutions through selecting and combining characteristics and properties of materials, systems, components, tools and equipment [(VCDSTC048)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSTC048)
* Effectively and safely use a broad range of materials, components, tools, equipment and techniques to produce designed solutions [(VCDSCD051)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD051)
* Independently develop criteria for success to evaluate design ideas, processes and solutions and their sustainability [(VCDSCD052)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD052)
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| **Design Technologies Level 6 Achievement Standard**  | **Example of Indicative Progress toward Level 8 Achievement Standard** | **Design Technologies Level 8 Achievement Standard** |
| By the end of Level 6:* Students describe some competing considerations in the design of solutions taking into account sustainability.
* They describe how design and technologies contribute to meeting present and future needs.
* Students explain how the features of technologies impact on designed solutions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts, suitable for identified needs or opportunities.
* They suggest criteria for success, including sustainability considerations and use these to evaluate their ideas and designed solutions.
* They combine design ideas and communicate these to audiences using graphical representation techniques and technical terms.
* Students record project plans including production processes.
* They select and use appropriate technologies and techniques correctly and safely to produce designed solutions.
 | In **Design Technologies**, indicative progression towards the Level 8 achievement standard may be when students:* Use class developed criteria for success to judge a timber clock for sustainability, aesthetics and functionality.

 * Select and use a range of tools to work with timber, including one that is more complex and needing some teacher guidance.
 | By the end of Level 8:* Students explain factors that influence the design of solutions to meet present and future needs.
* They explain the contribution of design and technology innovations and enterprise to society.
* Students explain how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on an evaluation of needs or opportunities.
* They develop criteria for success, including sustainability considerations, and use these to judge the suitability of their ideas and designed solutions and processes.
* They create and adapt design ideas, make considered decisions and communicate to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques.
* Students apply project management skills to document and use project plans to manage production processes.
* They independently and safely produce effective designed solutions for the intended purpose.
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| Previous level’s achievement standard as a starting point of comparison Previous level’s achievement standard as a starting point of comparison **CURRICULUM AREA – Technologies/Design Technologies** |
| **Context:** Students evaluate the sustainability of different fibres used for clothing. The technologies contexts in the teaching and learning plan are Food and fibre production, and Materials and technologies specialisations.**Content Descriptions:*** Examine and prioritise competing factors including social, ethical, economic and sustainability considerations in the development of technologies and designed solutions to meet community needs for preferred futures [(VCDSTS043)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSTS043)
* Analyse how food and fibre are produced when creating managed environments and how these can become more sustainable [(VCDSTC046)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSTC046)
* Analyse ways to create designed solutions through selecting and combining characteristics and properties of materials, systems, components, tools and equipment [(VCDSTC048)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSTC048)
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| **Design Technologies Level 6 Achievement Standard**  | **Example of Indicative Progress toward Level 8 Achievement Standard** | **Design Technologies Level 8 Achievement Standard** |
| By the end of Level 6:* Students describe some competing considerations in the design of solutions taking into account sustainability.
* They describe how design and technologies contribute to meeting present and future needs.
* Students explain how the features of technologies impact on designed solutions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts, suitable for identified needs or opportunities.
* They suggest criteria for success, including sustainability considerations and use these to evaluate their ideas and designed solutions.
* They combine design ideas and communicate these to audiences using graphical representation techniques and technical terms.
* Students record project plans including production processes.
* They select and use appropriate technologies and techniques correctly and safely to produce designed solutions.
 | In **Design Technologies**, indicative progression towards the Level 8 achievement standard may be when students:* Identify environmental considerations in the production of natural and synthetic fibres.
* Explain how at least one fibre can be produced more sustainably and identify economic considerations in the production of clothing.
 | By the end of Level 8:* Students explain factors that influence the design of solutions to meet present and future needs.
* They explain the contribution of design and technology innovations and enterprise to society.
* Students explain how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on an evaluation of needs or opportunities.
* They develop criteria for success, including sustainability considerations, and use these to judge the suitability of their ideas and designed solutions and processes.
* They create and adapt design ideas, make considered decisions and communicate to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques.
* Students apply project management skills to document and use project plans to manage production processes.
* They independently and safely produce effective designed solutions for the intended purpose.
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| Previous level’s achievement standard as a starting point of comparison Previous level’s achievement standard as a starting point of comparison **CURRICULUM AREA – Technologies/Design Technologies** |
| **Context:** Students explore how they can use code to controls systems. They use coding to program a robot to follow directions. The technologies context in the teaching and learning plan is Engineering principles and systems.**Content Descriptions:*** Analyse how motion, force and energy are used to manipulate and control electromechanical systems when creating simple, engineered solutions[(VCDSTC045)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSTC045)
* Use project management processes to coordinate production of designed solutions [(VCDSCD053)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD053)
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| **Design Technologies Level 6 Achievement Standard**  | **Example of Indicative Progress toward Level 8 Achievement Standard** | **Design Technologies Level 8 Achievement Standard** |
| By the end of Level 6:* Students describe some competing considerations in the design of solutions taking into account sustainability.
* They describe how design and technologies contribute to meeting present and future needs.
* Students explain how the features of technologies impact on designed solutions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts, suitable for identified needs or opportunities.
* They suggest criteria for success, including sustainability considerations and use these to evaluate their ideas and designed solutions.
* They combine design ideas and communicate these to audiences using graphical representation techniques and technical terms.
* Students record project plans including production processes.
* They select and use appropriate technologies and techniques correctly and safely to produce designed solutions.
 | In **Design Technologies**, indicative progression towards the Level 8 achievement standard may be when students:* Recognise how code can be used to control systems.
* Identify and explain the steps in the programming that cause a robot’s movements.
 | By the end of Level 8:* Students explain factors that influence the design of solutions to meet present and future needs.
* They explain the contribution of design and technology innovations and enterprise to society.
* Students explain how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on an evaluation of needs or opportunities.
* They develop criteria for success, including sustainability considerations, and use these to judge the suitability of their ideas and designed solutions and processes.
* They create and adapt design ideas, make considered decisions and communicate to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques.
* Students apply project management skills to document and use project plans to manage production processes.
* They independently and safely produce effective designed solutions for the intended purpose.
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| Previous level’s achievement standard as a starting point of comparison Previous level’s achievement standard as a starting point of comparison **CURRICULUM AREA – Technologies/Design Technologies** |
| **Context:** Students explore how food packaging has changed over time. In practical classes, they critique materials currently used and predict future developments. The technologies context in the teaching and learning plan is Food Specialisations.**Content Descriptions:*** Investigate the ways in which designed solutions evolve locally, nationally, regionally and globally through the creativity, innovation and enterprise of individuals and groups [(VCDSTS044)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSTS044)
* Analyse how characteristics and properties of food determine preparation techniques and presentation when creating solutions for healthy eating [(VCDSTC047)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSTC047)
* Independently develop criteria for success to evaluate design ideas, processes and solutions and their sustainability [(VCDSCD052)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD052)
* Critique needs or opportunities for designing and investigate, analyse and select from a range of materials, components, tools, equipment and processes to develop design ideas [(VCDSCD049)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD049)
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| **Design Technologies Level 6 Achievement Standard**  | **Example of Indicative Progress toward Level 8 Achievement Standard** | **Design Technologies Level 8 Achievement Standard** |
| By the end of Level 6:* Students describe some competing considerations in the design of solutions taking into account sustainability.
* They describe how design and technologies contribute to meeting present and future needs.
* Students explain how the features of technologies impact on designed solutions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts, suitable for identified needs or opportunities.
* They suggest criteria for success, including sustainability considerations and use these to evaluate their ideas and designed solutions.
* They combine design ideas and communicate these to audiences using graphical representation techniques and technical terms.
* Students record project plans including production processes.
* They select and use appropriate technologies and techniques correctly and safely to produce designed solutions.
 | In **Design Technologies**, indicative progression towards the Level 8 achievement standard may be when students:* Through teacher-assisted research, describe why food packaging is needed and has changed over time.
* Use class developed criteria for success to judge materials used in food packaging in terms of functionality and sustainability.
 | By the end of Level 8:* Students explain factors that influence the design of solutions to meet present and future needs.
* They explain the contribution of design and technology innovations and enterprise to society.
* Students explain how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on an evaluation of needs or opportunities.
* They develop criteria for success, including sustainability considerations, and use these to judge the suitability of their ideas and designed solutions and processes.
* They create and adapt design ideas, make considered decisions and communicate to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques.
* Students apply project management skills to document and use project plans to manage production processes.
* They independently and safely produce effective designed solutions for the intended purpose.
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| Previous level’s achievement standard as a starting point of comparison Previous level’s achievement standard as a starting point of comparison **CURRICULUM AREA – Technologies/Design Technologies** |
| **Context:** Students explore food sustainability and investigate issues that contribute to the three pillars of sustainability - economic, social and environmental.. The technologies context in the teaching and learning plan are Food and fibre production, and Food specialisations.**Content Descriptions:*** Critically analyse factors, including social, ethical and sustainability considerations, that impact on designed solutions for global preferred futures and the complex design and production processes involved [(VCDSTS054)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSTS054)
* Investigate and make judgments on the ethical and sustainable production and marketing of food and fibre [(VCDSTC057)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSTC057)
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| **Design Technologies Level 8 Achievement Standard**  | **Example of Indicative Progress toward Level 10 Achievement Standard** | **Design Technologies Level 10 Achievement Standard** |
| By the end of Level 8:* Students explain factors that influence the design of solutions to meet present and future needs.
* They explain the contribution of design and technology innovations and enterprise to society.
* Students explain how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on an evaluation of needs or opportunities.
* They develop criteria for success, including sustainability considerations, and use these to judge the suitability of their ideas and designed solutions and processes.
* They create and adapt design ideas, make considered decisions and communicate to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques.
* Students apply project management skills to document and use project plans to manage production processes.
* They independently and safely produce effective designed solutions for the intended purpose.
 | In **Design Technologies**, indicative progression towards the Level 10 achievement standard may be when students:* Identify the three pillars of sustainability and their consequences in one food production industry.
* Explain the interrelationship of economic, social and environmental sustainability in food and fibre production.
 | By the end of Level 10: * Students explain how people working in design and technologies occupations consider factors that impact on design decisions and the technologies used to create designed solutions.
* They identify the changes necessary to designed solutions to realise preferred futures they have described.
* When creating designed solutions for identified needs or opportunities students evaluate the features of technologies and their appropriateness for purpose for one or more of the technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on a critical evaluation of needs or opportunities.
* They establish detailed criteria for success, including sustainability considerations, and use these to evaluate their ideas and designed solutions and processes.
* They generate and connect design ideas and processes of increasing complexity and justify decisions. Students communicate and document projects, including marketing for a range of audiences.
* They independently and collaboratively apply sequenced production and management plans when producing designed solutions, making adjustments to plans when necessary.
* They select and use appropriate technologies skilfully and safely to produce quality designed solutions suitable for the intended purpose.
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| Previous level’s achievement standard as a starting point of comparison Previous level’s achievement standard as a starting point of comparison **CURRICULUM AREA – Technologies/Design Technologies** |
| **Context:** Students explore the question “what do you eat when fresh food is not always available?” They investigate the principles of sustainability, food safety and preservation in the creation of their own design brief for the production of a healthy meal that does not rely on fresh produce. The technologies context in the teaching and learning plan is Food specialisations.**Content Descriptions:*** Explain how designed solutions evolve with consideration of preferred futures and the impact of emerging technologies on design decisions[(VCDSTS055)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSTS055)
* Work flexibly to safely test, select, justify and use appropriate technologies and processes to make designed solutions [(VCDSCD062)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD062)
* Develop project plans to plan and manage projects individually and collaboratively taking into consideration time, cost, risk and production processes [(VCDSCD064)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD064)
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| **Design Technologies Level 8 Achievement Standard**  | **Example of Indicative Progress toward Level 10 Achievement Standard** | **Design Technologies Level 10 Achievement Standard** |
| By the end of Level 8:* Students explain factors that influence the design of solutions to meet present and future needs.
* They explain the contribution of design and technology innovations and enterprise to society.
* Students explain how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on an evaluation of needs or opportunities.
* They develop criteria for success, including sustainability considerations, and use these to judge the suitability of their ideas and designed solutions and processes.
* They create and adapt design ideas, make considered decisions and communicate to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques.
* Students apply project management skills to document and use project plans to manage production processes.
* They independently and safely produce effective designed solutions for the intended purpose.
 | In **Design Technologies**, indicative progression towards the Level 10 achievement standard may be when students:* Identify environmental and economic advantages of at least one food preservation method.
* Explain one of the food preservation methods selected in their design brief, and justify its inclusion.
* With teacher guidance, select appropriate cooking methods, based on their research and testing, to safely produce their meal.
 | By the end of Level 10: * Students explain how people working in design and technologies occupations consider factors that impact on design decisions and the technologies used to create designed solutions.
* They identify the changes necessary to designed solutions to realise preferred futures they have described.
* When creating designed solutions for identified needs or opportunities students evaluate the features of technologies and their appropriateness for purpose for one or more of the technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on a critical evaluation of needs or opportunities.
* They establish detailed criteria for success, including sustainability considerations, and use these to evaluate their ideas and designed solutions and processes.
* They generate and connect design ideas and processes of increasing complexity and justify decisions. Students communicate and document projects, including marketing for a range of audiences.
* They independently and collaboratively apply sequenced production and management plans when producing designed solutions, making adjustments to plans when necessary.
* They select and use appropriate technologies skilfully and safely to produce quality designed solutions suitable for the intended purpose.
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| Previous level’s achievement standard as a starting point of comparison Previous level’s achievement standard as a starting point of comparison **CURRICULUM AREA – Technologies/Design Technologies** |
| **Context:** Students create their own design brief for the development of a toy using CAD (computer-aided design) software, with the option to print their prototype using a 3D printer. The technologies context in the teaching and learning plan is Engineering principles and systems. **Content Descriptions:*** Investigate and make judgements on how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions[(VCDSTC056)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSTC056)
* Develop project plans to plan and manage projects individually and collaboratively taking into consideration time, cost, risk and production processes [(VCDSCD064)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD064)
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| **Design Technologies Level 8 Achievement Standard**  | **Example of Indicative Progress toward Level 10 Achievement Standard** | **Design Technologies Level 10 Achievement Standard** |
| By the end of Level 8:* Students explain factors that influence the design of solutions to meet present and future needs.
* They explain the contribution of design and technology innovations and enterprise to society.
* Students explain how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on an evaluation of needs or opportunities.
* They develop criteria for success, including sustainability considerations, and use these to judge the suitability of their ideas and designed solutions and processes.
* They create and adapt design ideas, make considered decisions and communicate to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques.
* Students apply project management skills to document and use project plans to manage production processes.
* They independently and safely produce effective designed solutions for the intended purpose.
 | In **Design Technologies**, indicative progression towards the Level 10 achievement standard may be when students:* Identify common functions and systems required in the development of their toy (such as a car).
* Develop and follow a production flowchart showing a logical sequence for their design.
 | By the end of Level 10: * Students explain how people working in design and technologies occupations consider factors that impact on design decisions and the technologies used to create designed solutions.
* They identify the changes necessary to designed solutions to realise preferred futures they have described.
* When creating designed solutions for identified needs or opportunities students evaluate the features of technologies and their appropriateness for purpose for one or more of the technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on a critical evaluation of needs or opportunities.
* They establish detailed criteria for success, including sustainability considerations, and use these to evaluate their ideas and designed solutions and processes.
* They generate and connect design ideas and processes of increasing complexity and justify decisions. Students communicate and document projects, including marketing for a range of audiences.
* They independently and collaboratively apply sequenced production and management plans when producing designed solutions, making adjustments to plans when necessary.
* They select and use appropriate technologies skilfully and safely to produce quality designed solutions suitable for the intended purpose.
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| Previous level’s achievement standard as a starting point of comparison Previous level’s achievement standard as a starting point of comparison **CURRICULUM AREA – Technologies/Design Technologies** |
| **Context:** Students create a design brief to produce an item for a client. It should identify intended users, criteria for success, constraints, available resources, and a timeframe for the project. Students need to consider who, what/why, when, where and how. The technologies context in the teaching and learning plan is Materials and technologies specialisations. **Content Descriptions:*** Critique needs or opportunities to develop design briefs and investigate and select an increasingly sophisticated range of materials, systems, components, tools and equipment to develop design ideas [(VCDSCD060)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD060)
* Apply design thinking, creativity, innovation and enterprise skills to develop, modify and communicate design ideas of increasing sophistication[(VCDSCD061)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD061)
* Work flexibly to safely test, select, justify and use appropriate technologies and processes to make designed solutions [(VCDSCD062)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD062)
* Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability [(VCDSCD063)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD063)
* Develop project plans to plan and manage projects individually and collaboratively taking into consideration time, cost, risk and production processes [(VCDSCD064)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDSCD064)
 |
| **Design Technologies Level 8 Achievement Standard**  | **Example of Indicative Progress toward Level 10 Achievement Standard** | **Design Technologies Level 10 Achievement Standard** |
| By the end of Level 8:* Students explain factors that influence the design of solutions to meet present and future needs.
* They explain the contribution of design and technology innovations and enterprise to society.
* Students explain how the features of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on an evaluation of needs or opportunities.
* They develop criteria for success, including sustainability considerations, and use these to judge the suitability of their ideas and designed solutions and processes.
* They create and adapt design ideas, make considered decisions and communicate to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques.
* Students apply project management skills to document and use project plans to manage production processes.
* They independently and safely produce effective designed solutions for the intended purpose.
 | In **Design Technologies**, indicative progression towards the Level 10 achievement standard may be when students:* With teacher support, they develop detailed criteria for success, including sustainability considerations to evaluate their designed solution.
* Apply logical sequencing to project plans and can modify plans when necessary.
* With teacher guidance, select and use appropriate materials to safely produce their designed solution.
 | By the end of Level 10: * Students explain how people working in design and technologies occupations consider factors that impact on design decisions and the technologies used to create designed solutions.
* They identify the changes necessary to designed solutions to realise preferred futures they have described.
* When creating designed solutions for identified needs or opportunities students evaluate the features of technologies and their appropriateness for purpose for one or more of the technologies contexts.
* Students create designed solutions for each of the prescribed technologies contexts based on a critical evaluation of needs or opportunities.
* They establish detailed criteria for success, including sustainability considerations, and use these to evaluate their ideas and designed solutions and processes.
* They generate and connect design ideas and processes of increasing complexity and justify decisions. Students communicate and document projects, including marketing for a range of audiences.
* They independently and collaboratively apply sequenced production and management plans when producing designed solutions, making adjustments to plans when necessary.
* They select and use appropriate technologies skilfully and safely to produce quality designed solutions suitable for the intended purpose.
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