


| Year Level Plan | | Year 9 | | Design Technologies | |  | |
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| Food and Fibre / Food Specialisation | | | | | | | |
| <p>Overview</p> <p>The Technologies curriculum provides students with opportunities to consider how solutions that are created now will be used in the future. Students will identify the possible benefits and risks of creating solutions. They will use critical and creative thinking to weigh up possible short-term and long-term impacts. As students' progress through the Technologies curriculum, they will begin to identify possible and probable futures, and their preferences for the future. They develop solutions to meet needs considering impacts on liveability, economic prosperity and environmental sustainability. Students will learn to recognise that views about the priority of the benefits and risks will vary and that preferred futures are contested.</p> <p>The Australian Curriculum: Technologies describes two distinct but related subjects:</p> <ul style="list-style-type: none"> • Design and Technologies, in which students use design thinking and technologies to generate and produce designed solutions for authentic needs and opportunities • Digital Technologies, in which students use computational thinking and information systems to define, design and implement digital solutions. <p>The Australian Curriculum: Technologies will ensure that all students benefit from learning about and working with traditional, contemporary and emerging technologies that shape the world in which we live. This learning area encourages students to apply their knowledge and practical skills and processes when using technologies and other resources to create innovative solutions, independently and collaboratively, that meet current and future needs.</p> <p>The practical nature of the Technologies learning area engages students in critical and creative thinking, including understanding interrelationships in systems when solving complex problems. A systematic approach to experimentation, problem-solving, prototyping and evaluation instils in students the value of planning and reviewing processes to realise ideas.</p> <p>Brief Description of Subject</p> <p>The Australian Curriculum: Design and Technologies actively engages students in creating quality designed solutions for identified needs and opportunities across a range of technologies contexts. Students consider the economic, environmental and social impacts of technological change and how the choice and use of technologies contributes to a sustainable future.</p> <p>By the end of each band, students will have had the opportunity to create different types of designed solutions that address the technologies contexts: Engineering principles and systems, Food and fibre production, Food specialisations and Materials and technologies specialisations. For breadth of study, the curriculum has been developed to enable students to complete at least one product, one service and one environment within each band.</p> | | | | | | | |
| <p>Unit 1 - Food and fibre production: <i>Contemporary Trends in Australia</i></p> <p>Students investigate and make judgments on the production of food and fibre. They critically analyse factors (including social, ethical considerations) that impact on designed solutions. They then apply design thinking as they develop a proposal for a managed environment that enhances food and fibre production in a specific context.</p> | | <p>Unit 2 - Food and fibre production: <i>Explore Your Culture</i></p> <p>Students investigate and make judgments on the ethical and sustainable production and marketing of food and fibre. They critically analyse factors (including social, ethical and sustainability considerations) that impact on designed solutions for global preferred futures. They then apply design thinking as they develop a proposal for an innovative managed environment that enhances food or fibre production in a specific context (Food production in the 21st Century)</p> | | <p>Unit 1 - Food specialisations: <i>Food Productions</i></p> <p>Students investigate and make judgments on how the principles of food safety, preparation, presentation and sensory perceptions influence the creation of food solutions. They critically analyse factors - social, ethical that impact on designed solutions for global preferred futures and apply design thinking as they develop a specialised food product, service for a challenging client.</p> | | <p>Unit 2 - Food specialisations: <i>Food and You</i></p> <p>Students investigate and make judgments on how the principles of food safety, preservation, preparation, presentation and sensory perceptions influence the creation of food solutions for healthy eating. They critically analyse factors (including social, ethical and sustainability considerations) that impact on designed solutions for global preferred futures and apply design thinking as they develop a specialised food product, service or environment for a challenging client.</p> | |
| Assessment Tasks | | | | | | | |
| <p>In Design and Technologies students are actively engaged in the processes of creating designed solutions for personal, domestic, commercial and global settings for sustainable and preferred futures. In both teaching and learning and assessment students undertake projects. A project is a set of activities undertaken by students to address specified content, involving understanding the nature of a problem, situation or need; creating, designing and producing a solution to the project task; and documenting the process. Project work has a benefit, purpose and use; a user or audience who can provide feedback on the success of the solution; limitations to work within; and a real-world technologies context influenced by social, ethical and environmental issues. Students work independently and collaboratively on projects as they critique, explore and investigate needs and opportunities; generate, develop and evaluate ideas; and plan, produce and evaluate designed solutions. They use criteria for success that are predetermined, negotiated with the class or developed by students.</p> <p>The assessment for each unit provides evidence of student learning and provides opportunities for teachers to make judgments about whether students have met the Australian Curriculum: Design and Technologies Years 9 and 10 achievement standard. Students should contribute to an individual assessment folio that provides evidence of their learning and represents their achievements. The folio should include a range and balance of assessments for teachers to make valid judgments about whether the student has met the achievement standard.</p> <p>It will gather evidence of students ability to:</p> | | | | | | | |
| <p>Unit 1 - Food and fibre production: <i>Contemporary Trends in Australia</i></p> <p>Design an innovative managed environment that enhances food and fibre production:</p> <ul style="list-style-type: none"> • identifying how food and fibre production environments can be managed to become more productive and sustainable as part of a global preferred future • explaining how people working in design and technologies occupations consider multiple factors when designing • evaluating needs or opportunities, generating design ideas and communicating a proposal for an innovative environment • selecting and safely and skilfully using appropriate technologies when working with growing spaces • developing detailed criteria for success, and using these to evaluate their ideas, designed solutions and processes • applying and adjusting sequenced production and management plans to gather information and develop and communicate the proposal. | | <p>Unit 2 - Food and fibre production: <i>Explore Your Culture</i></p> <p>Design and produce an item which meets a community, national or global need or opportunity:</p> <ul style="list-style-type: none"> • identifying how combining characteristics and properties of materials, systems, components, tools and equipment can be applied in designed solutions • explaining how people working in design and technologies occupations consider factors that impact on design decisions and the technologies used • evaluating needs or opportunities for wearable solutions, generating design ideas and communicating them appropriately • selecting and using appropriate technologies skilfully and safely to produce high-quality designed solutions • establishing detailed criteria for success to evaluate their ideas, designed solutions and processes • applying and adjusting sequenced production and management plans to produce designed solutions | | <p>Unit 1 - Food specialisations: <i>Food Productions</i></p> <p>Redesign a part of a car or bike to make it safer in a crash:</p> <ul style="list-style-type: none"> • combining the characteristics and properties of materials with force, motion and energy to create engineered solutions • explaining how people working in design and technologies occupations consider factors that impact on design decisions and the technologies used • evaluating needs or opportunities for enhancing safety, generating design ideas and communicating them appropriately • selecting and using appropriate technologies skilfully and safely to produce high-quality designed solutions • establishing detailed criteria for success to evaluate their ideas, designed solutions and processes • applying and adjusting sequenced production and management plans to produce designed solutions. | | <p>Unit 2 - Food specialisations: <i>Food and You</i></p> <p>Develop a specialised food product, service or environment for a challenging client:</p> <ul style="list-style-type: none"> • applying principles of food safety, preservation, preparation, presentation and sensory perceptions • explaining how people working in food technologies occupations consider multiple factors and how changes to designed solutions can realise preferred futures • evaluating needs or opportunities for a food product, service or environment, generating design ideas and communicating them appropriately • selecting and using appropriate technologies skilfully and safely to produce high-quality food products • establishing detailed criteria for success to evaluate their ideas, designed solutions and processes • applying and adjusting sequenced production and management plans to produce designed food solutions. | |