

Ag and Food Unit

Context

- ☐ Digital Technologies
- ☐ Engineered Systems

- ☒ Agriculture and Food Technologies
- ☐ Material Technologies

STAGE 4

Timing - 15 Weeks

Indicative Hours - 37.5 hours

Resources

Clickview or another media source
Student workbook and tutorials
Student Laptops and internet access
Kitchen equipment tools and machines
Digital Folio Template

Fresh and preserved produce
Growing plot or pots
Seeds, soil, herbicides

Unit Description

The Agriculture and Food Technologies context integrates content from agriculture (food and fibre production) and food technologies to enable delivery with consideration of the school context and available resources.

Agriculture (food and fibre production) focuses on the investigation of managed environments, such as farms and plantations. Students learn about the processes of food and fibre production and investigate the innovative and sustainable supply of agriculturally produced raw materials. Students develop knowledge and understanding about managed systems that produce food and fibre through designing and producing solutions.

Food technologies focuses on the use of resources produced and harvested to sustain human life. Students learn about the characteristics and properties of food. Students are provided with opportunities to develop knowledge and understanding about food selection and preparation, food safety and how to make informed choices when experimenting with and preparing nutritious food.

In this unit, students will look at the role of agriculture and farming in Australia. Students will plant and grow edible plants in the Arden Anglican School Kitchen planter box and school grounds - "The Arden Grounds".

For their Practical Assessment, students will be required to design and make a burger/stir fry suitable for teenagers. The focus will be on developing something tasty and nutritious. A healthy alternative to the fast burgers that are available in the marketplace. They will be able to source some of their ingredients from The Arden Grounds.

Their steps through the development of their stir fry/burger will be documented via a folio

Students will also develop skills and awareness of safety and hygiene in the kitchen as well as recipe interpretation, time management skills and teamwork.

Finally, students will evaluate their burger/stir fry with an in-class sensory assessment activity.

Outcomes

TE41DP designs, communicates and evaluates innovative ideas and creative solutions to authentic problems or opportunities

TE42DP plans and manages the production of designed solutions

TE43DP selects and safely applies a broad range of tools, materials and processes in the production of quality projects

TE45AG investigates how food and fibre are produced in managed environments

TE46FO explains how the characteristics and properties of food determine preparation techniques for healthy eating
TE410TS explains how people in technology related professions contribute to society now and into the future

Assessment Overview (40%)

The nature of Project Based Learning (PBL) demands assessment for, as and of learning occur throughout the development of a design project and folio. Teachers should conduct Formative Assessment during various stages of the design process and follow continuous reporting guidelines.

Digital Technologies

Students will utilise a range of digital technologies through the application of equipment and software during the design process. A range of tutorials have been developed and chosen to develop basic skills. Students will then apply their learning to the production of a project and folio. Students learn to use industry-level software packages, such as PowerPoint and Adobe Illustrator. Students learn to open, save and transfer files and develop internet research skills.

Cross-curriculum priorities

- ☒ Aboriginal and Torres Strait Islander histories and cultures
- ☐ Asia and Australia's engagement with Asia
- ☒ Sustainability


General capabilities

- ☒ Critical and creative thinking
- ☐ Ethical understanding
- ☐ ICT capability
- ☒ Intercultural understanding
- ☒ Literacy
- ☒ Numeracy
- ☒ Personal and social capability

Other learning across the curriculum areas

- ☐ Civics and citizenship
- ☐ Difference and diversity
- ☒ Work and enterprise






Content	Teaching, Learning and Assessment	Resources
<p>Introduction to course plus safety, hygiene and kitchen equipment overview.</p> <ul style="list-style-type: none"> ▪ identify and apply safe and ethical work practices, for example: <ul style="list-style-type: none"> ▶ correct use of tools and equipment 	<ul style="list-style-type: none"> ❖ Teacher introduces students to the unit – 'Grow, Cook, Eat' ❖ Teacher outlines equipment needs and classroom housekeeping matters ❖ Safety - Students complete allocated <u>On Guard</u> safety tutorials and safety tests ❖ Hand out booklets, also available on Schoolbox ❖ <u>Safety in the Kitchen</u> <ul style="list-style-type: none"> ➤ Teacher leads students through an overview of safety in the kitchen. See booklet. ➤ <u>Class Task 1</u> Student Activity - in pairs, students compile a risk assessment of the classroom. They put their findings in a table. See booklet. Page 5 & 6 	<ul style="list-style-type: none"> • Student booklet • Clickview • Onguard tests

Content	Teaching, Learning and Assessment	Resources
<ul style="list-style-type: none"> ▶ food safety and hygiene practices <ul style="list-style-type: none"> ▪ identify and apply safe and ethical work practices, for example: ⚖️ 🛠️ ⭐ ▶ correct use of tools and equipment ▶ food safety and hygiene practices 	<ul style="list-style-type: none"> ➤ Class Task - students choose one risk that they have identified in their assessment. For the identified risk a flyer is to be designed to highlight the risk and appropriate safety precautions that could be taken. See booklet. ➤ Clickview: Safety in the domestic kitchen & filling in page 13 & 14 <ul style="list-style-type: none"> ❖ <u>Hygiene in the Kitchen</u> <ul style="list-style-type: none"> ➤ Teacher leads students through personal hygiene information. See booklet. ➤ Student Activity - students participate in the online/interactive website Do Food Safely http://dofoodsafely.health.vic.gov.au/index.php ➤ Teacher leads students through the <u>Food Safety Thermometer</u> activity. See booklet. Students complete questions relating to food hygiene and the food safety thermometer. ➤ Class Activity – students watch Clickview presentation - https://online.clickview.com.au/libraries/videos/3713974/food-safety-and-hygiene ➤ Student Activity - students complete related questions found on pages 9 and 10 of class booklet. ➤ Students read through article and complete accompanying questions. Teacher leads classroom discussion about key features of the article. See booklet. https://www.smh.com.au/national/nsw/how-to-avoid-food-poisoning-this-christmas-20181218-p50n7e.html ➤ Student Activity - students complete kitchen cleaning activity. See  booklet. ➤ Homework Activity – students complete Kitchen Safety and Hygiene Review activity. 	<ul style="list-style-type: none"> • Student booklet • Clickview • Interactive websites
<ul style="list-style-type: none"> ▪ identify and apply safe and ethical work practices, for example: ⚖️ 🛠️ ⭐ 	<u>Equipment in the Kitchen</u> <ul style="list-style-type: none"> ➤ Teacher leads students through an overview of measuring tools and their correct use in the kitchen. See booklet. ➤ Student Activity – individually, students complete activities on pages 14- 16 booklet. 	<ul style="list-style-type: none"> • Student booklet

Content	Teaching, Learning and Assessment	Resources
<ul style="list-style-type: none"> ▶ correct use of tools and equipment ▶ food safety and hygiene practices 	<ul style="list-style-type: none"> ➤ Teacher leads students through an overview of recipe abbreviations and their use in cooking. See booklet. ➤ Class Activity – students complete activities on pages 14- 16 booklet. ➤ Teacher leads students through an overview of equipment/utensils and their correct use in the kitchen. See booklet ➤ Student Activity - students complete the equipment table on pages 18- 19 booklet. 	

Final part of course introduction – Glossary

Identifying and defining Students:

- investigate the importance of food and fibre production to Australia's food security and economy including Asia's imports and exports (ACTDEK029)  
- investigate how food and fibre production is managed in environments as a system and how sustainability can be improved, for example: (ACTDEK032)   
 - ▶ plants and/or animal species grown in managed environments
 - ▶ land management by Aboriginal and/or Torres Strait Islander Peoples
 - ▶ boundaries, inputs, outputs, processes and feedback occurring in a managed environment
- evaluate environments that have been designed

Class Task 2 : Glossary

- Class Activity - students complete Glossary of terms that will be commonly used in this unit. See booklet page 32.



















❖ Food and Fibre Production in Australia



- Teacher leads students through the importance of food and fibre production to Australia's food security and economy including Asia's imports and exports. **Page 22 of booklet.** Class Discussion - What factors/events could destroy the Australian Food Industry? How can this be avoided? **Refer to page 23 of booklet.**
- Class Investigation and discussion – What grows where? Students research to see where 6 examples (produce/fibre) are grown throughout Australia. **Page 24 of booklet.**
- Teacher leads students through the concept of sustainable farming practices. See booklet.
- **Class Task 3** – students choose one identified sustainable farming practice. Conduct research and investigation and create a fact sheet on Canva. See page 25 of booklet. **Continuous reporting feedback to students and parents**
- <https://bit.ly/2VG3skr> **Rice Growers Association Australia. From paddock to plate.** A series of short videos and worksheet

❖ Community group Gardens

- Class Task - students complete an evaluation of 'The Arden Grounds' at Arden Anglican School
- **Class Task 4** See booklet **page 27 – (label Task 4 in booklet)**
- Class Discussion - What features could be added/introduced at The Arden Grounds to improve the food production?
- Class Investigation – research community gardens that exist in the South West Sydney area. See booklet.
- Class Discussion – view the Parramatta council website. why does Parramatta Council promote ways to improve gardens etc.

- Student booklet
- Clickview
- Council website

<p>Researching and planning Students:</p> <ul style="list-style-type: none"> design and plan a product associated with agricultural production (ACTDEP036)       research legal and ethical requirements associated with agricultural production, e.g. keeping animals   investigate ideal conditions for growth and development of an agricultural plant or animal (ACTDEK032)    develop a schedule or calendar for ongoing care of a plant or animal species associated with an agricultural project (ACTDEP039)     acquire and interpret data, for example: (ACTDIP025, ACTDIP026)    <ul style="list-style-type: none"> local environmental and/or physical conditions, eg rainfall, temperature nutrition information panels, e.g. saturated fat, sugar content 	<ul style="list-style-type: none"> ➤ Student Activity - Class Task 6 Propose a set of animal welfare guidelines that would need to be followed when keeping chickens in a chicken coop. ➤ Teacher leads an overview of safety in the 'The Arden Grounds' – including correct PPE, tool use and manual handling. ➤ Student Activity – complete safety overview on Page 42 of booklet. ➤ Class Activity – each class will be allocated a pot in the “The Arden Grounds” Kitchen Garden – The Arden Grounds. Each class will plant a different vegetable/herb eg. Carrots, lettuce, spring onions, coriander. Students in the class will be responsible for planting and caring for their plants. ➤ Student Activity - students undertake research and complete planting calendar. See booklet. ➤ Student Activity - students enter data/record information in relation to the local environmental and/or physical conditions, e.g. rainfall, temperature using this link http://m.weatherzone.com.au/nsw/sydney/ see booklet. ➤ Student Activity - students enter data/complete the calendar for the caring of their garden pots. See booklet. <p>❖ These two activities will be used in the student Folio (assessment task)</p> <p>❖</p> <p>❖ <u>Cook It – Class will prepare a number of recipes throughout this unit</u></p> <p>❖ Each recipe can be found in the Student Booklet. Each recipe is accompanied by a student activity which will allow students to:</p> <p>❖ investigate and communicate how a recipe can be improved to enhance nutritional value, and justify the recipe adjustment</p> <p>❖ identify a range of food preparation techniques and analyse the impact on nutrient value</p> <ul style="list-style-type: none"> ➤ Pikelets (could be teacher dem only – for purpose of teaching measuring and recipe reading) or first practical (double lesson needed) ➤ Corn and Ham Fritters ➤ Chicken San Choy Bow ➤ Assessment Task (Stir Fry) 	<ul style="list-style-type: none"> • Student booklet • Practical equipment and food resources
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Content	Teaching, Learning and Assessment	Resources
	<ul style="list-style-type: none"> ➤ Classic Rhubarb and Apple Crumble ➤ Paella ➤ Nachos, Salsa and Pita Chips ➤ Lemon Delicious 	
<p>Producing and implementing Students:</p> <ul style="list-style-type: none"> ▪ produce and implement an agricultural project and/or produce nutritious food (ACTDEP039)  ▪ select, justify and use a range of appropriate tools and techniques in an agricultural project and/or food preparation (ACTDEK037)  ▪ identify and apply safe and ethical work practices, for example: <ul style="list-style-type: none"> ▶ correct use of tools and equipment ▶ food safety and hygiene practices 	<p>❖ <u>Eat It – Class will prepare a number of recipes throughout this unit</u></p> <ul style="list-style-type: none"> ● Assessment Task: Practical Test ➤ Individually, students will be required to design a recipe (burger/stir fry) and use at least one ingredient (herb) that will be harvested from the 'The Arden Grounds'. It doesn't have to be from their own class pot. The scaffold for this recipe development can be found in the Student booklet. ➤ Practical Test – Students will prepare and present their recipe in- class. ● Assessment Task: Folio ➤ Students will be required to document the growing of their agricultural product and the development of their recipe in a digital folio or PowerPoint folio template. ➤ Folio – The student booklet will act as a draft copy of their folio. A scaffold for their Folio presentation will be provided in the assessment task handout. Students will be required to: <ul style="list-style-type: none"> - evaluate the effectiveness and suitability of choices made during the development and production of the solution - assess the solution against the predetermined criteria 	<ul style="list-style-type: none"> • Student booklet. • Practical Assessment task • Folio Assessment task scaffold
<p>Testing and evaluating</p> <ul style="list-style-type: none"> ▪ evaluate the effectiveness and suitability of choices 	<ul style="list-style-type: none"> ● Assessment Task: Folio ➤ Students will be required to document the growing of their agricultural product and the development of their recipe in a digital folio or PowerPoint folio template. 	<ul style="list-style-type: none"> • Folio Assessment task scaffold

Content	Teaching, Learning and Assessment	Resources
<p>made during the development and production of the solution</p> <p>· assess the solution against the predetermined criteria</p>	<p>➤ Folio – The student booklet will act as a draft copy of their folio. A scaffold for their Folio presentation will be provided in the assessment task handout. Students will be required to:</p> <ul style="list-style-type: none"> - evaluate the effectiveness and suitability of choices made during the development and production of the solution - assess the solution against the predetermined criteria 	

UNIT EVALUATION

Class	Teacher Code	Start Date	End Date	Were all outcomes, content & skills taught? (if no, please specify)	Evaluation <i>Were any significant changes made to the planned teaching and learning program, such as a change to the scope and sequence or parts of the program not covered?</i>
8TES, 8TEK	JLI	Term 1 Week 1	Term 2 Week 5	Yes	No significant changes made. Used OneNote for the theory workbook.
8TEm	JLI	Term 2 Week 6	Term 3 Week 10		