



<b>Food Unit 'Fight Food Waste'</b> <b>Food Education and Sustainability Training</b>	
<b>Year</b>	Year 7 and 8
<b>Weeks</b>	10 Weeks (10 theoretical lessons and 9 practical lessons - 1.0 hour each to adjust)
<b>Timing</b>	
<b>Teacher</b>	
<b>Unit Overview</b>	
<p>This Technologies unit includes 10 x one-hour theoretical lessons and 9 x one-hour supporting practical lessons. Students will learn about the benefits of eating a variety of food, food waste prevention, and the vital role we can play in protecting our planet and creating a sustainable future.</p> <p>Students will learn how to prepare and cook nutritious food, using the Australian Dietary Guidelines to highlight the health benefits of consuming a variety of food and how to use food hygiene and safety practices when cooking food. They will design and create recipes that focus on a variety of foods, avoiding food waste and describe how the characteristics and properties of food determine preparation techniques and presentation when designing solutions as evidence of their learning.</p> <p>Key inquiry questions include:</p> <ul style="list-style-type: none"><li>• Why is food waste an issue?</li><li>• Why is food wasted in the home and/or at school?</li><li>• What can we do as individuals to reduce food waste?</li><li>• How can our individual actions create change and help build a sustainable future?</li><li>• How do we make informed food choices to increase the variety of foods we consume?</li><li>• How can we design a promotion to showcase how to fight food waste in Australia?</li><li>• How can we apply design thinking and design production skills to devise food waste solutions?</li></ul>	

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Please note: we recommend you review external sources to ensure they are accessible and appropriate for your audience.	

<b>Main Outcomes in the Australian Curriculum</b>	
<b>Design and Technologies Knowledge and Understanding</b>	
<a href="#"><u>AC9TDE8K05</u></a>	Analyse how properties of foods determine preparation and presentation techniques when designing solutions for healthy eating.
<a href="#"><u>AC9TDE8K04</u></a>	Analyse how food and fibre are produced in managed environments and how these can become sustainable.
<a href="#"><u>AC9TDE8K02</u></a>	Analyse the impact of innovation and the development of technologies on designed solutions for global preferred futures.
<a href="#"><u>AC9TDE8K01</u></a>	Analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments.
<b>Design and Technologies Processes and Production Skills</b>	
<a href="#"><u>AC9TDE8P01</u></a>	Analyse needs or opportunities for designing, and investigate and select materials, components, tools, equipment and processes to create designed solutions.
<a href="#"><u>AC9TDE8P02</u></a>	Generate, test, iterate and communicate design ideas, processes and solutions using technical terms and graphical representation techniques, including using digital tools.
<a href="#"><u>AC9TDE8P03</u></a>	Select, justify and use suitable materials, components, tools, equipment, skills and processes to safely make designed solutions.
<a href="#"><u>AC9TDE8P04</u></a>	Develop design criteria collaboratively including sustainability to evaluate design ideas, processes and solutions.
<a href="#"><u>AC9TDE8P05</u></a>	Develop project plans to individually and collaboratively manage time, cost and production of designed solutions.

Assessment		
Assessment for Learning	Assessment as Learning	Assessment of Learning
<ul style="list-style-type: none"> <li>• Pre-Assessment</li> <li>• Students' knowledge about the issue of food waste.</li> </ul>	<ul style="list-style-type: none"> <li>• Students produce a variety of work samples, including designated assessment activities. These should be evaluated to determine students' level of achievement and understanding.</li> <li>• Student understanding may be assessed through the use of observational checklists, anecdotal records and analysis of contributions to class discussions.</li> </ul>	<ul style="list-style-type: none"> <li>• Students engage in peer assessment, based on jointly derived criteria for activity completion.</li> <li>• Student understanding may be assessed through the use of observational checklists, anecdotal records and analysis of contributions to class discussions.</li> </ul>
Adjustments		
<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Consideration to teaching CTT</li> <li><input checked="" type="checkbox"/> Consideration to environment CTE</li> <li><input checked="" type="checkbox"/> Consideration to lesson delivery CTLD</li> <li><input checked="" type="checkbox"/> Consideration to instructions CTI</li> <li><input checked="" type="checkbox"/> Consideration to printed material CTPM</li> <li><input checked="" type="checkbox"/> Consideration to time management and organisation CTTM&amp;O</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Consideration to content CTC</li> <li><input checked="" type="checkbox"/> Consideration to class discussions CTCD</li> <li><input checked="" type="checkbox"/> Consideration to written responses CTWR</li> <li><input checked="" type="checkbox"/> Consideration to reading tasks CTRT</li> <li><input checked="" type="checkbox"/> Consideration to assessment CTA</li> <li><input type="checkbox"/> Other _____</li> </ul>	

Understanding Goals	Cross-Curriculum Priorities
<p>The following goals are provided as suggestions for teachers:</p> <p>UG1 Students have a deep understanding of why it is important to take action on food waste</p> <p>UG2 Students have an understanding of the behaviours that can reduce food waste in the home and/or at school</p> <p>UG3 Students have an increased knowledge and understanding of food waste at a local, national and global level</p> <p>UG4 Students understand where food comes from, and are better equipped to make informed, food choices</p> <p>UG5 Students have an increased knowledge and confidence to prepare, cook and eat a variety of food in a sustainable manner</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Asia and Australia’s engagement with Asia</li> <li><input checked="" type="checkbox"/> Aboriginal and Torres Strait Islander histories and cultures</li> <li><input checked="" type="checkbox"/> Sustainability</li> </ul>
General Capabilities	
<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Critical and Creative thinking</li> <li><input checked="" type="checkbox"/> Ethical understanding</li> <li><input checked="" type="checkbox"/> Digital Literacy</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Intercultural Understanding</li> <li><input checked="" type="checkbox"/> Literacy</li> <li><input checked="" type="checkbox"/> Numeracy</li> <li><input checked="" type="checkbox"/> Personal and Social Capability</li> </ul>
Vocabulary	
<p>Constraints, Considerations, Consume, Dehydration, Ecological Footprint, Fermentation, Food System, Food Waste, Future Thinkers, Nutrition, Nutrients, Pickling, Preservation, Promotion, Sustainability, Supply Chain, Variety</p>	



Lesson Sequences		
Content	Teaching Learning and Assessment	Differentiation/ Support Techniques
<b>LESSON 1: Investigating and Defining – The Essential Question and Scenario</b> <b>Practical: Fruit Bites or Tzatziki Dip with Vegetable Sticks (or Beetroot &amp; Cottage Cheese Dip)</b>		
<p>Analyse needs or opportunities for designing, and investigate and select materials, components, tools, equipment and processes to create designed solutions <a href="#">AC9TDE8P01</a></p> <p>Develop design criteria collaboratively including sustainability to evaluate design ideas, processes and solutions <a href="#">AC9TDE8P04</a></p>	<p><b><u>Teacher background information</u></b> In this lesson students are introduced to the issue of food waste and the assessment task for the unit.</p> <p><b><u>The essential question: How can the power of individual choice create a future without food waste?</u></b></p> <p><u>Let's set the scene! Food waste is a global problem:</u></p> <ul style="list-style-type: none"> <li>• Globally one third of all food produced is wasted, costing the global economy nearly \$1 trillion (USD) each year, while 828 million people still go hungry, and three billion people can't afford a healthy diet.</li> <li>• Wasting food feeds climate change. In fact, 10% of global greenhouse gas emissions comes from food waste which rots in landfill and releases methane into the atmosphere.</li> <li>• But there's good news! According to scientists at Project Drawdown, reducing food waste is the most powerful way you can take climate action.</li> <li>• In Australia, we waste more than 7.6 million tonnes each year and 2.5 million tonnes of it comes from our homes. In 2021, OzHarvest launched their first national campaign 'Use It Up' to tackle food waste at home.</li> </ul> <p>Sources: <a href="#">Food Waste Facts and Hunger Facts   OzHarvest Sustainability</a> <a href="#">Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming</a> <a href="#">Use It Up   OzHarvest   Save food, save money, save the planet!</a></p> <p><b><u>Recommended activities</u></b> <u>Individual student activity - Students complete the pre-program survey:</u> To receive a report tracking the impact of the FEAST program on student behaviour, please complete the online student pre-program surveys (this should take 10-15 minutes). The link is emailed to you prior to the start of the program (please contact <a href="mailto:feast@ozharvest.org">feast@ozharvest.org</a> if you have not received the link). You will need access to a device per student.</p>	<p><b><u>Support</u></b></p> <p>As an alternative to writing, allow students to create posters or digital presentations that represent their understanding.</p> <p>Provide definitions ahead of time to students who have difficulty processing information, so they can be better prepared to engage with the lesson content.</p>



### **Assessment**

The FEAST Food Unit 'Fight Food Waste' has been designed so teachers can modify the assessment tasks to suit the needs of their students. Before starting the FEAST program with your students, it is important to decide if the task will be assessed individually or as a group.

#### Individual assessment:

- Look through the design brief (See [Your Design Brief in the Student Design Folio, Page 2](#)) and marking rubric (see [Assessment Rubrics in the Unit of Enquiry, pages 23-27](#)) to decide what you would like to assess your students on. The 'Use It Up' Recipe Card and Information Sheet are recommended to assess, whereas you may choose to omit the 'Fight Food Waste' Promo.

#### Group assessment:

- Form a team (max 4). Each member needs to actively participate and the workload needs to be shared evenly. It works best when the teacher selects the groups.
- Choose team names. The team names should reflect the theme of the unit in some way. For example: food fighters, future thinkers, change makers etc.
- As a team, delegate tasks for each member, ensuring the workload is shared evenly. This could be done by allocating the 'Use It Up' Recipe Card to Team Member 1, the Information Sheet to Team Member 2, the 'Fight Food Waste' Promo planning to Team Member 3 and Team Member 4 could be the team leader, assisting each member with completing the task.
- Select a commonly wasted food using [The Top Six to Fix | The Path to Half - Solutions to halve Victoria's food waste by 2030](#). See [Initial Planning for The Unit in the Student Design Folio, page 3](#).

#### Student Design Folio and 'Fight Food Waste' Promo (optional).

- Students to complete a Design Folio by completing all worksheets in the Student Design Folio which includes templates for the 'Use It Up' Recipe Card, Information Sheet and the 'Fight Food Waste' Promo script (optional).
- Teams are to compile their 'Use It Up' Recipe Cards and Information Sheets to assist with the creation of their promotion. The creative promotion will successfully promote their 'Use It Up' recipe idea, what they've learnt about food waste and how to inspire others to avoid wasting food.
- The promotion has been left open-ended to allow for student creativity. The promotion could be a speech, video advertisement, skit, jingle etc.

### **Support**

Students with low literacy may need extra help with surveys. Providing access to links at home or during support sessions allows them to work at their own pace and seek assistance.

Discuss alternative ways of gathering survey data with your FEAST coordinator.



	<b>Recommended Activities</b> <u>Whole class activity:</u> <ul style="list-style-type: none"><li>• Capture student’s interest and find out what students already know about food waste. Ask students to define what ‘food waste’ might mean to them.</li><li>• Create a mind map capturing students’ prior understanding of how food gets wasted, what type of food often goes to waste at school or at home and what recipes could be made using these foods. For example, bananas are often wasted, instead we could make banana bread, smoothies or banana pikelets.</li></ul> <u>Whole class activity - watch the following videos:</u> <ul style="list-style-type: none"><li>• “Food Waste Explained” by OzHarvest, to learn about the problem of food waste, the resources that go into producing food and what individuals can do to fight food waste. Watch here: <a href="https://youtu.be/wgLuXvtaLyQ">https://youtu.be/wgLuXvtaLyQ</a> animation (2:12 min).</li><li>• “Use It Up” by OzHarvest, to see the impact food waste has on climate change. Watch here: <a href="https://youtu.be/-rGhLuZwRIU">https://youtu.be/-rGhLuZwRIU</a> (0:49min).</li><li>• “Food Fighter - Sydney Harbour” by OzHarvest, to see how much food Australians waste each year. Watch here: <a href="https://youtu.be/sk09b0B_3UM">https://youtu.be/sk09b0B_3UM</a> (0:35min).</li></ul> <p>Note: This video states that Australian’s waste \$20 billion worth of food a year. This number has increased to \$36.6 billion!</p> <u>Whole class activity:</u> <p>Share a copy of the design brief with the students and talk about the requirements of the task. See <u>Your Design Brief in the Student Resources Design Folio, page 2</u>. Explain to the class that their task is to:</p> <ul style="list-style-type: none"><li>• Design a ‘Use It Up’ Recipe Card that uses up commonly wasted foods to create a delicious meal.</li><li>• Design an Information Sheet with the following tips to promote your selected commonly wasted food:<ol style="list-style-type: none"><li>a) Explain how the recipe tackles food waste.</li><li>b) Identify one storage tip to make your recipe last longer.</li><li>c) Explain how the recipe encourages a variety of foods.</li><li>d) Explain one way you would cook or prepare your recipe to maintain or improve the nutritional properties and benefits e.g. steaming vegetables maintains vitamin content compared to boiling.</li><li>e) Identify one food safety tip to consider when creating your recipe.</li><li>f) Discuss the characteristics and properties of the ingredients used in the recipe e.g. flavour, appearance, texture, and aroma.</li></ol></li></ul>	<b>Support</b>  Provide definitions ahead of time to students who have difficulty processing information, so they can be better prepared to engage with the lesson content.  Create a word wall displaying key terms with images or icons to reinforce meanings.  Write clear, succinct instructions and definitions on the board or provide them on individual cards.



Individual student activity:

- Ask students to define the task they have been set. See [Analysis of the Design Brief in the Student Design Folio, pages 4-5](#).
- Analysis of the design brief: Students are tasked with looking carefully at the design brief and listing the specifications they are required to follow to complete the task (i.e. the considerations and constraints that may affect their project)
  - Considerations are flexible factors that allow the product to be modified. For example, choice of ingredients, allergies.
  - Constraints are inflexible factors that must comply with the design brief. For example, made within the practical lesson time frame, includes a top wasted food and appeals to target audience (adolescents).
- Criteria for success: Students refer to the design brief and their list of considerations and constraints to develop 6-8 criteria for success. Make sure students put them into question format.
  - The criteria for success is used to assess design ideas, processes and solutions for the 'Use It Up' Recipe Card, Information Sheet and 'Fight Food Waste' Promo.
  - For example: Did the 'Use It Up' Recipe Card include commonly wasted foods?

**Suggested activities**

Homework activity:

- Conduct a home fridge and pantry food waste audit to understand the different types of food waste created at home. See [Home Food Waste Audit](#) by OzHarvest. Consider completing the audit at the beginning and at the end of the program and compare results.

**Support**

Videos should be viewed with captions to offer students a second opportunity to grasp the information presented. Please email [feast@ozharvest.org](mailto:feast@ozharvest.org) for access to transcripts for those with processing or hearing difficulty.

Ensure students have access to all video links so they can watch them at home at their own pace, in a quiet environment. This allows them to fully absorb the material and revisit any sections as needed.



**Practical Cooking Activity – Introducing safety and hygiene through the preparation of Fruit Bites or Dips with Vegetable Sticks (Beetroot & Cottage Cheese Dip or Tzatziki Dip)**

OzHarvest recommends that all classes make a simple cold recipe as their first cooking activity to introduce students to the importance of basic kitchen hygiene and safety before attempting more complex recipes.

Safety and hygiene introduction: Prior to undertaking the practical lesson students complete the worksheet Food Safety and Hygiene by OzHarvest FEAST. Visit [https://education.ozharvest.org/wp-content/uploads/2020/04/FEAST-Food-Safety-Hygiene\\_editable-2.pdf](https://education.ozharvest.org/wp-content/uploads/2020/04/FEAST-Food-Safety-Hygiene_editable-2.pdf)

It is recommended that teachers' set-up the classroom with the cooking ingredients and equipment (except knives) prior to the students arriving, ensuring each workstation has serving dishes on hand.

Whole class activity:

- Discuss cooking procedures and food safety. See Risk Assessment in the FEAST Practical Guide, page 7.
- Read through the recipe with the whole class.
- Demonstrate how to prepare the recipe:
  - Chop different shaped fruit safely e.g. cut fruit to make a flat surface and make a claw shape with your hand holding the food – keep your fingertips clear of the knife.
  - Chop carrot safely into sticks e.g. cut lengthways to make a flat surface and make a claw shape with your hand holding the food – keep your fingertips clear of the knife.
  - If time permits, watch “Basic Knife Skills” by Tasty (6:33min) to demonstrate a variety of basic knife skills. Watch here: <https://youtu.be/G-Fg7l7G1zw>
- Form groups or pairs. Recommended group size is 2 students.
- Students wash hands (download the Hand Washing Poster in the Practical Tab of the Teacher Portal)
- Hand out knives when students have collected their ingredients and assembled at their workstations.
- Students prepare dish.
- Students wash dishes and clean up, explain the planned washing up process, including wiping down workstations and pack away/reset for next class.
- Students eat.

**Support**

Consider:

- Flexible pacing
- Modified recipes
- Peer support
- Clear demonstration
- Pre-session interviews

Awareness Areas:

- Food texture sensitivities
- Dietary considerations
- Physical accessibility needs

Contact your FEAST Coordinator for a copy of our Inclusion Guide for notes on practical sessions.