



YEAR 5

What a waste!

But what exactly are we wasting?

LESSON OVERVIEW

This lesson has been developed to build student understanding of exactly how much food waste is going into the classroom bin and their household bins for short period of time e.g. a few days but no longer than a week. They will research the production and distribution of an item of food waste found in the classroom bin as a farm to shelf, or farm to plate study. They will investigate the impact that food waste has regarding time, energy, resources, money and the actual food product. Furthermore, they will discuss preventative and management strategies to reduce food waste such as utilise composting and charities.

LEARNING INTENTION

Students will:

- Identify the types of foods being wasted by families and in the classrooms each week
- Research the farm to table journey of an item of food waste
- Reflect upon and record the impacts on our society, environment and economy when an item becomes food waste

RESOURCES

- Butcher's paper
- Interactive whiteboard with internet connection
- Student worksheet
- Laptops, computers and/or tablets
- Whiteboard for recording
- A container with a lid to collect food waste in the classroom (2 Litre ice cream container may be ideal)
- Optional - calculators

DIFFERENTIATION

Support: Teacher scaffolds tasks and questions to suit student ability, students work with others and adults to complete tasks

Structured: Use small group instruction to help support students. complete their research and create worksheet

Extension: Students research independently, with the option to extend their flow charts into the household and then landfill

ASSESSMENT

- Monitoring understanding throughout class discussion and questioning
- Collecting work samples
- Teacher feedback

AUSTRALIAN CURRICULUM LINKS

Science

Science Understanding - Solids, liquids and gases have different observable properties and behave in different ways (**ACSSU077**)

Humanities and Social Sciences

Geography - The environmental and human influences on the location and characteristics of a place and the management of spaces within them (**ACHASSK113**)





LESSON INTRODUCTION - 5 MINUTES



Before lesson

Ask selected students to inspect the classroom rubbish each day for a designated period of time and record the food items and quantities being thrown away. Competition between classes to see which wastes the least and which class improves the most.

1. Review the list of classroom food waste. Discuss and brainstorm why certain items are being thrown out at school. Ask students to reflect on their household bins and how much food waste is being thrown out each week.
2. Discuss the concept of food waste – i.e. food that is discarded but still edible. Ask students to discuss why wasting food is detrimental to society (raise ideas around how hunger affects the homeless, world hunger and famine levels on a mass scale), our environment (using water to grow food, fuel to truck it to supermarkets, food going to the rubbish etc.), and our economy (giving food away, production costs, etc.). Teacher Tip – Use the following report to gain further context and insight - <https://reports.foodbank.org.au/foodbank-hunger-report-2021/?state=au>
3. In this discussion students also may devise practical solutions for preventing food waste and secondary actions such as recycling, donating, or composting. Ask students if they know of any strategies in shops, the community etc. that are helping curb and prevent food waste. Examples include; compost bins, charity food drives, supermarket initiatives such as 'odd bunch' fruit and vegetable packaging, food hampers etc.

MAIN BODY OF TEACHING - 25 MINUTES



4. Propose the question to students – “What else are we wasting besides food?” Record their ideas on butcher’s paper or an interactive whiteboard. They may suggest things like money, packaging, things or that can be composted. Ask the students to brainstorm the processes that go into growing and packaging food in order for it to arrive on a supermarket shelf. What is being wasted along the way? Write their ideas on butcher’s paper or an interactive whiteboard. Examples include; soil, water, energy, packaging and treatment, or human effort.
5. Ask students to select a fresh fruit or vegetable item from the classroom food waste list to research its journey from farm to plate. Students can use laptops, computers or tablets to research the steps involved, or this can be done as a whole class using videos, texts and sites that the teacher has found on a specific food. Examples online include:
 - ‘All About Eggs’ www.allabouteggs.com.au
 - ‘Life of a strawberry, stop food waste, save the food’ <https://www.youtube.com/watch?v=CLFOK4U34wI>
 - ‘Crunchy carrots: from farm to fork’ www.youtube.com/watch?v=Pf74rrn1uLk
 - ‘Western Australian carrots - from paddock to you’ www.youtube.com/watch?v=Fv_dbu_6k20

Look at visual flow charts online of a food’s journey from farm to plate and analyse the steps in the journey, including the cyclic nature of composting and recycling.



MAIN BODY OF TEACHING - 25 MINUTES



Examples online include:

- Local food system <http://mastersofmedia.hum.uva.nl/blog/2012/03/27/visualizing-food-systems/>
 - 'Flow chart of canning foods' www.fnbnews.com/Top-News/canning-of-fruits-and-vegetables-38522
 - Animals in the compost cycle <https://earthmatter.org/compost-learning-center/animals-in-the-cycle/>
 - 'Composting life cycle' www.compostcommunity.org/apps/blog/show/44136031-composting-spotlight-
 - 'Life cycle of a banana peel' <https://wealthfromwaste.wordpress.com/2016/06/12/blog-post-a-1-day-waste-audit/>
6. Students work in small groups, pairs or independently using devices to research. Record their findings using the flow chart on their worksheet. They must describe the steps using diagrams and words then record what would be wasted at each step if that item of food was to end up in the bin. For example; soil, seeds, water, human energy through machines, electricity to run machines, cardboard, plastic, fuel for transport, and time. Depending on student ability, model or assist students with the completion of the flow chart, or complete one jointly and another independently.
 7. Students share their findings on certain foods with the class. Discuss the impact of all that waste on our farming and supermarket industries. As a class brainstorm and record simple ways that households and individuals can prevent wasting food, especially the food that they researched.

PLENARY - 15 MINUTES



8. Watch the video on food waste. <http://www.abc.net.au/btn/classroom/food-waste/10533514>
In extension, you may like to watch the following video which is a great visual representation of how food waste equates to money waste - <https://youtu.be/VGTPKKOVoz4>
9. Discuss the bigger picture of reducing food waste and its effects not just on families and households, but on communities, retail, farming and agriculture, and the environment.

HOME ACTIVITY / EXTENSION TASK IDEAS



FOR HOME

Students use the home worksheet to complete a checklist of foods in their bin or refrigerator, reflecting on the types of resources that are required to process and transport that item from farm to shelf. They then complete a flow chart showing the journey of an item of food in their household, depicting its journey from 'farm to fridge'.

EXTENSION

Students film their own short news articles or mini documentaries where they explain what is wasted when we throw out food and provide some tips for avoiding food waste. These videos can be shown to other classes or shared with the community via the school's media channels.

EXTENSION

Read the Queensland Government food waste facts. <https://www.qld.gov.au/environment/management/waste/recovery/reduction/reduce-food-waste/facts>

Discuss harmful gas that organic waste emits in landfill—methane gas. Research methane gas and how it is harmful for the environment.