

WHY DO WE WASTE SO MUCH FOOD?



Multi-level mathematics, social sciences, health, literacy, science and arts-based activities on a 'Love Food Hate Waste' theme brought to you by ...



HOW MUCH FOOD DO WE THROW AWAY?

- Find out how many students bring a lunch box from home or buy their lunch at school or from a shop each day. Display results in table form **eg**

Bring a lunch box	Buy from a shop	Buy at school
20	5	10

As a class, have students compile a list of all the different foods (and drinks) that students eat for lunch during a week. What are most popular foods and drinks and what are the least popular. Have students share reasons for their ratings. Have each student construct their own personal lunch food popularity table, **eg**

Foods I really love	Foods I quite like	Foods I don't like
Chicken sandwiches filled rolls	oranges lettuce salad	raw carrots bread and butter

- As a class, list all foods that they don't completely eat and foods that they throw away. Have each students calculate the amount of food they waste each year at school (194 days approx). How much of each food is wasted per year by the whole class? Can this food cost be calculated? Did they include growing costs?
- Invite the school caretaker to talk to the class about food wastage at school to find out:
 - how many bins of waste food are collected each day/week
 - the types of food most wasted and what happens to this food.
- Before data projecting the New Zealand waste food infographic at: <https://tinyurl.com/ydgjr37q> challenge students to: list the top ten foods New Zealanders throw away every year. Use the infographic to discover and discuss:
 - the cost to each (average) family of food thrown away each year
 - the cost for New Zealand and the supermarket trolleys it would fill
 - the weight of food and equivalent foods thrown away per family
 - the six simple steps we can take to reduce our food waste.

CONDUCT A HANDS-ON SCHOOL FOOD AUDIT

How Much Food Do We Waste? Lesson Plan

This practical hands-on activity links to the maths curriculum and is suitable for students of all ages. Students determine how much food they waste and how much rubbish they create when they don't finish their lunch. Download at:

<https://lovefoodhatewaste.co.nz/food-waste-lesson-plans>

Select: **Activity 1 How much food do we waste?**

MORE THAN A NEW ZEALAND PROBLEM

- Introduce students to the idea that wasting of food is a worldwide problem. Project the following website for shared reading/discussion: <https://lovefoodhatewaste.co.nz/food-waste/the-global-issue> to discover the following:
 - the amount of food that is produced in the world and never eaten

- what we don't see when we throw wasted food into the bin
- the many reasons why wasting food is bad for the environment
- how wasting food wastes other precious resources
- what we owe to the people who are hungry and starving
- identify positive steps are being taken in different countries around the world.
- To summarise the problem, extent and consequences of world food wastage, play and discuss the Food Wastage Footprint video at: www.youtube.com/watch?time_continue=33&v=loCvRkcaH6Q What solutions does it suggest? What can we all do to become part of the solution?

THE FOOD WASTE PROBLEM IN NEW ZEALAND

www.facebook.com/lovefoodhatewaste/posts/1623242624657135

- Play the above video featuring a New Zealand expert on food waste – Dr Miranda Miroso, NZ-China Food Protection Network Science Leadership Team Member, featured on the television programme *Fair Go*. Through discussion have students discover:
 - the ways New Zealand families waste food
 - the steps we can all take to reduce food waste at its source
 - how we can save thousands of dollars in money and how and why it will help our planet
 - how to use and re-organise the fridge to help avoid food wastage
 - why it is important to know the difference between best by and use by labels on food.



LOVE FOOD & HATE WASTE

- Introduce the New Zealand **Love Food Hate Waste** campaign at: lovefoodhatewaste.co.nz Read the **ABOUT US** section to find out who supports this campaign, what it hopes to achieve and how long it will run. Check if your local council supports this campaign.
- Visit: <https://lovefoodhatewaste.co.nz/food-waste> and use class shared to get an overview of the problem.
- Have students conduct group or individual research into what we waste at: select **FOOD WASTE** from the menu and select **WHAT WE WASTE**. Have groups report back and comment on the following:
 - the amount of food we waste in New Zealand each year
 - the amount of rubbish the average New Zealand house throws out every year
 - the main reasons we waste so much food, the types of food we waste and how much it is worth
 - reasons for wasting so much bread and vegetables
 - the surprising things that Kiwis throw out and the things that did not come as a surprise.



HOW MUCH, CONSEQUENCES & SOLUTIONS



- Do students know that the average New Zealand family wastes about \$600 a year by throwing out food? To ensure students are familiar with the **'How much money are you wasting'** quiz, have all the class take the quiz using a show of hands for the most popular answers at:
www.lovefoodhatewaste.co.nz/quiz-much-money-wasting-throw-away-food
- As a homework task, have students ask the older members and/or family cooks to take the quiz. Have students report back the amount of money their family is 'throwing away' every year. What is the total amount of money wasted by all class families every year?

REDUCING OUR WASTE – GROUP RESEARCH AT: <https://lovefoodhatewaste.co.nz/reduce-your-waste>

- Divide the class into 4 groups and assign each group two of the topics from the menu bar for detailed research. The group task is to discover the main messages of each **reduce your waste topic**, simplify them into simple messages and report back and present these messages to the class. Brief topic descriptors are as follows.
 - Topic 1 – Planning:** Planning your meals and making a shopping list will not only reduce your waste but save you money.
 - Topic 2 – Portion Sizes:** Cooking the right amount of food is an easy way to reduce food waste – but how much should be cooked?
 - Topic 3 – Food Storage:** The way different types of food are stored and where they are stored has a huge impact on how long it lasts.
 - Topic 4 – Fridge and Freezer:** Fridges and freezers are the greatest weapons in the fight against food waste but must be used correctly.
 - Topic 5 – Expiry Dates:** Understanding the difference between use by and best before dates can save food and money.
 - Topic 6 – Leftovers:** We often cook far too much, so what can we do to overcome this and what can we do with leftovers?
 - Topic 7 – Preserving:** Not done so much these days but how do we preserve different foods to make them last as long as possible?
 - Topic 8 – Non-Avoidable Food Waste:** Not matter how hard we try there will always be food we can't eat. What actions can we take to avoid wasting this food including sharing it with others?
- Students present their research messages in interesting ways, eg
 - *paint/posters to illustrate reduce your waste messages*
 - *prepare and act out a mini drama to illustrate a message(s)*
 - *prepare/administer multi-choice quizzes to test student knowledge*
 - *prepare and record 30 second video TV advertisements to get important messages across*



Is your fridge cool enough? It should be **below 5°C** to keep food fresh for longer. Use a fridge thermometer to check if in doubt.



Planning your meals helps you use up all your food. Check your cupboards, fridge and freezer before going to the shops.



The **'use by'** date is about food safety, **'best before'** just refers to when it's at its freshest.

- *turn messages into questions and ask groups to discuss and answer these questions, eg 'When planning and buying our food, why should we beware of bulk deals?'*
- *plan, act out and shoot short videos (less than a minute) to illustrate important messages, eg make a TV commercial*
- *prepare and present **pro and anti** group debates around an important reduce your waste message, eg 'It is better to cook too much food and compost the leftovers than to cook less and not have any leftovers.'*

THE MOST IMPORTANT MESSAGE OF ALL

- Introduce the idea that the more people who take action to reduce food waste, the less food we will waste. Do they know that 60 councils all around New Zealand are running **Love Food Hate Waste events** where people learn how to reduce their food waste? Have students check out what is happening in their local region at:
<https://lovefoodhatewaste.co.nz/about-us/participating-councils>
- Enthuse students with the idea of running their own **Love Food Hate Waste event** at school for their families and local communities. Have students brainstorm and list interesting activities that could take place at their event to get the important messages out: These could include
 - *set up stations for all class groups to share their topic presentations with parents/communities*
 - *have all families take the 'how much money are you wasting' quiz*
 - *have a local gardener demonstrate effective composting methods*
 - *invite a local council officer to speak about the food waste recycling programme offered in your area*
 - *invite 'cooks' to share recipes (or demonstrate) about what they do with leftovers*
 - *have students guide families through the posters, videos recipes and infographics at: lovefoodhatewaste.co.nz/food-waste/resources*
 - *discover what New Zealand community groups are doing to reduce food waste at: lovefoodhatewaste.co.nz/food-waste/resources/links ask families for ideas about what their community could do*
 - *for motivation, challenge families to 'keep a kitchen diary' for a week and return it to school – publish results on school website. Download at: lovefoodhatewaste.co.nz/food-waste/resources/how-to-guides*

3 FURTHER FOOD WASTE LESSON PLANS AT:

<https://lovefoodhatewaste.co.nz/food-waste-lesson-plans>
HOW DO WE EAT APPLES : Select Activity 2

An interactive activity linked to the maths curriculum using the context of apples to explore the idea that the ways we cook and eat our food influences how much food we waste.

WHY IS WASTING FOOD WRONG: Select Activity 3

This activity, linking to the science curriculum, asks students to the time and energy which goes into making our food. The activities can be done as a classroom 'quiet sit down' exploration or played as an interactive game.

HOW CAN WE MAKE FOOD LAST LONGER?: Select Activity 4

This activity links to the science curriculum and explores why cut fruit and vegetables turn brown and the methods we can use to slow the browning process.