Food Waste Reduction

Resource aid for Schools

National Environment Agency

Safeguard • Nurture • Cherish

Learning Outcomes

1. Overview of Food Waste Management in Singapore
2. Food Waste Management Strategies
3. Tips to Reduce Food Waste
4. Donation of Excess Food
5. Conclusion
6. Additional Information for Teachers

1 Overview of Food Waste Management in Singapore

Overview of Food Waste Management in Singapore

Food waste makes up about **half of the average** waste disposed of by each household daily*

Food waste accounts for about **10% of the total waste** generated in Singapore, but only **19% of food waste is recycled**.

The rest of it is disposed of at the waste-to-energy (WTE) plants for incineration with the ashes sent to Semakau Landfill.

**Based on Household Waste Study conducted in 2017*

Overview of Food Waste Management in Singapore

In 2020, Singapore generated 665 million kg of food waste. That is equivalent to **2 bowls of rice per person per day!**

Most of the food waste are avoidable and can be better managed. E.g. leftovers from a meal, expired food, stale food, blemished fruits and vegetables.

Overview of Food Waste Management in Singapore

Singapore imports **more than 90%** of its food supply

When food is wasted, more food has to be sourced to meet the demand.

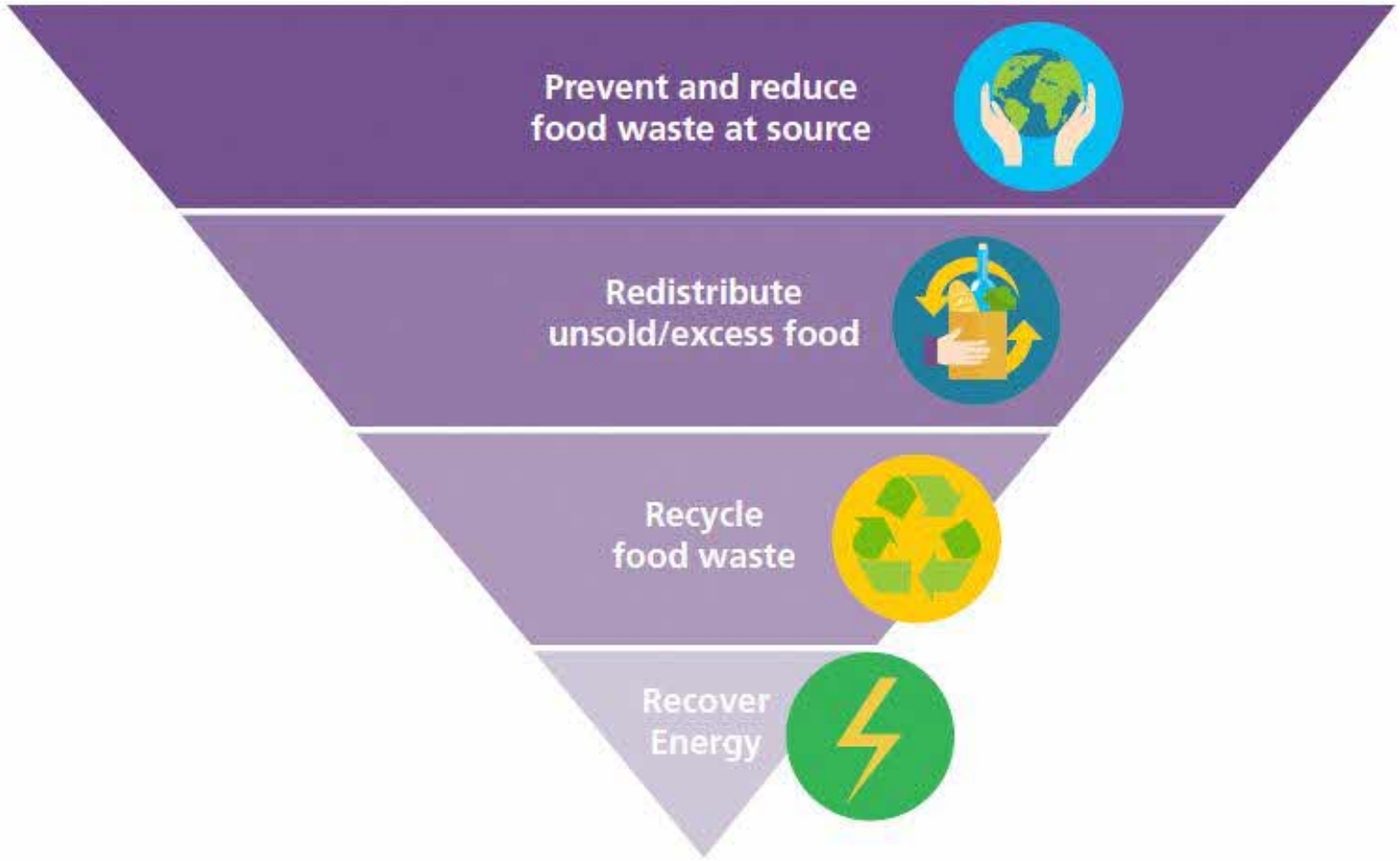
This also results in increasing pressure on our waste disposal facilities to meet the current rate of waste generation.

Increasing amount of food waste affects Singapore's food security and is unsustainable.

Hence we should conserve resources and minimise food wastage!

2 Food Waste Management Strategies

Food Waste Management Strategies



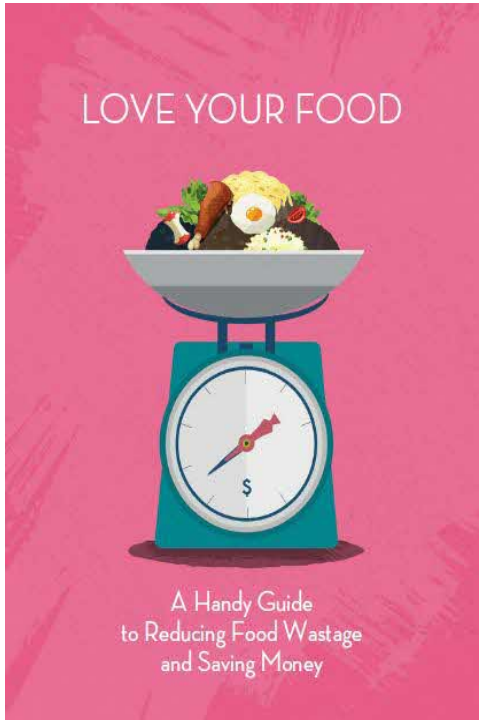
Food Waste Management Strategies

Strategy 1: Prevent and reduce food wastage at source

- Best way to manage food waste is to avoid wasting food at the onset.

- Everyone can play an active role and encourage friends and family to reduce food wastage.

- The National Environment Agency (NEA) has a Food Waste Reduction handy guide to encourage the adoption of smart food purchase, storage and preparation habits that help consumers save money while reducing food wastage at source. It is available at *https://www.cgs.gov.sg/docs/default-source/Programmes/fwrhandyguide.pdf*



Food Waste Management Strategies

Strategy 1: Prevent and reduce food wastage at source

<u>Say YES to Waste Less Campaign</u>

- Aims to encourage public to reduce excessive use of disposable and food wastage.

- More than 95 partners with over 2,100 premises joined the movement to encourage public to reduce the use of disposal and/or food wastage in 2020.

SAY YES TO WASTE LESS

Food Waste Management Strategies

Strategy 2: Redistribute unsold / excess food

- Organisations and members of the public are encouraged to donate their unsold and excess food to food distribution organisations or through mobile applications such as Olio, TreeDots & DBS virtual Foodbanking

- Food manufacturers, food retail establishments and supermarkets can contact food distribution organisations to make arrangements for the donation of their unsold and excess food.

- Members of the public can also reduce food waste by donating safe and edible food items which they no longer wish to consume.

Food Waste Management Strategies

Strategy 3: Recycle/Treat food waste/Repurpose food waste

- Recycle those food waste that are unavoidable e.g. banana skin
- Food waste must be separated from non-food waste items, such as plastic containers, as they may disrupt the recycling process.
- Segregation of food waste is best done at the source (i.e. at the point of generation) to minimise any contaminants for the recycling process.
- Repurpose food waste such as using vegetable scraps to make soup, or into vegetable chips!

Food Waste Management Strategies

Strategy 4: Recover energy

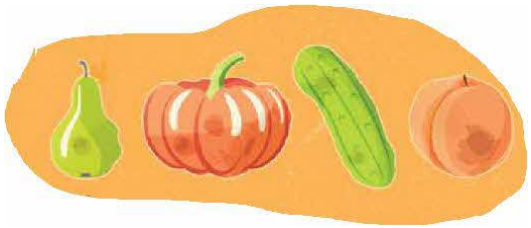
- Food waste that is not recycled or treated will be disposed of at the waste-to-energy (WTE) plants for energy recovery.
- The heat from the combustion generates superheated steam in boilers, and the steam drives turbo generators to produce electricity.

3 Tips to Reduce Food Waste

Tips to Reduce Food Waste

During Grocery Shopping

- **Check your kitchen before going grocery shopping -** This prevents duplicate purchases.
- **Plan your purchases ahead -** Make a shopping list and keep to it!
- **Look past the imperfection -** Odd-looking, bruised and blemished fruits and vegetables can still be trimmed and used for cooking!



Tips to Reduce Food Waste

Storing of Food

- **Store it correctly** – Follow the storage instructions on the product's packaging.
- **Check your fridge** – The chiller operates best between $0^{O}C$ and $4^{O}C$, and freezer at $-18^{O}C$ and below.
- **Store better** – Such as in airtight containers for food products such as chips and crackers.
- **Practice "First to expire, first out"** – to use products nearer to expiry dates first!
- **Use the freezer** – Box up leftovers so they can last longer and reheated easily for the next meal.

Tips to Reduce Food Waste

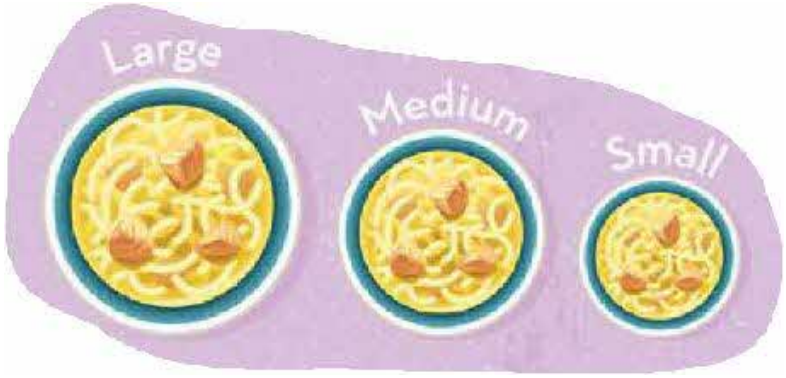
Cooking at Home

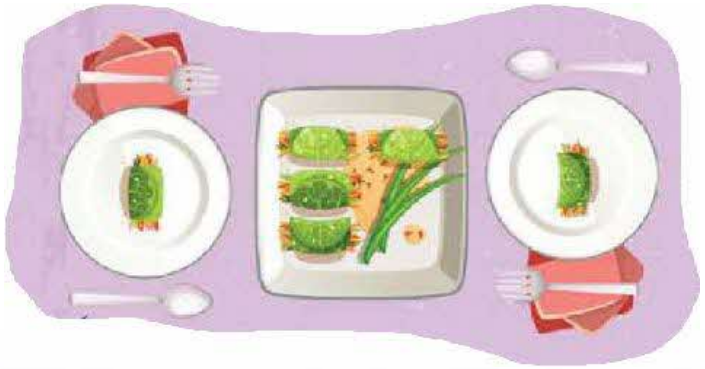
- **Keep track of what's in the kitchen –** plan meals according to what you have and what is expiring
- **Cook just enough –** Determine the amount to be cooked with the diner's appetite and eating habits in mind.
- **Cook a "use it up" meal every week –** To use only what is already in the kitchen, including leftovers.
- **Share and pack** any excess food for your guests, friends or neighbours!

Tips to Reduce Food Waste

Eating Out

- **Order only what you can eat –** Start with lesser food and order more later if there is a need.
- **Ask for advice –** Consult the server on portion sizes to determine how much to order.
- **Downsize your order –** Ask for a smaller portion
- **Swap sides –** Request for replacement of ingredients that you do not eat when ordering
- **Don't rush to order more –** it takes 15 – 20 minutes after eating to start feeling full!





Tips to Reduce Food Waste

Parties and Events

- **Provide just enough –** Downsize the portion of each dish if there are a variety of dishes
- **Cater for less than the actual number of guests –** At about 10% - 15% lesser
- **Know what your guests are bringing –** To carefully plan and avoid duplicates
- **Keep it neat –** Encouraging guests to not leave scraps on their plates. This makes cleaning easier and minimises food wastage!

4 Donation of Excess Food

Donation of Excess Food

Food distribution organisations	Contact Information
Fei Yue Community Services Website: www.fycs.org	Email: donate@fycs.org Contact No.: 6563 1106
Food Bank Singapore Website: www.foodbank.sg	Email: enquiries@foodbank.sg Contact No.: 6831 5395
Food from the Heart Website: www.foodfromtheheart.sg	Email: info@foodheart.org Contact No.: 6280 4483
Willing Hearts Website: www.willinghearts.org.sg	Email: willingheartsingapore@gmail.com Contact No.: 6476 5822

5 Conclusion

Conclusion

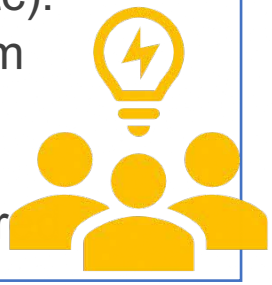
- Most of the food waste generated **is avoidable** and can be better managed.
- There is a **need to conserve previous resources** and minimise food wastage.
- Practice the **various tips** to reduce food waste.
- **Donate** your excess food to food distribution organisations!

6 Additional Information for Teachers

ACTIVITY IDEAS

Creating Awareness and Deepening Insights

- List food waste minimisation as one of the important values in school's teaching.
- Incorporate food waste minimisation teaching in school curriculum and co-curriculum activities.
- Design educational materials on food waste (e.g. posters, flyers, videos, songs, jingles etc).
- Place nudges / reminders around school campus (e.g. Wall murals, banners, wall-hanging stickers, footpath stickers, etc).
- Sharing sessions for students by students (e.g. skits, classroom discussions, assembly sharing, etc).
- Classroom activities (e.g. colouring activity, drawing, role play, etc).
- Discuss about news on food waste during assembly or classroom time.
- Explore projects on food waste composting.
- Participate in workshops, learning journeys and tours to be inspir about food waste minimisation.



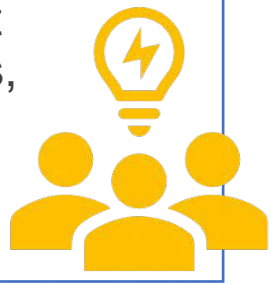
ACTIVITY IDEAS

Collaborations with Other Schools

- Inter-schools programmes (e.g. primary school students design educational materials and teach pre-schoolers of a preschool in it's precinct on food waste, etc).
- Inter-schools competitions (e.g. comparing food waste volume, food waste initiatives, art or music challenge etc).
- Sharing sessions for students from different schools to discuss on food waste minimisation.

Going Beyond the School – Sharing Ownership in the Community

- Conduct food waste reduction activities around the estate.
- Design food waste-themed game or exhibit and showcase at community spaces or events (e.g. wall decals, digital posters, facade paintings, standees).
- Be involved in community projects.



EDUCATIONAL MATERIALS

1. **Love Your Food Handy Guide**

_YF Handy Guide

2. **Love Your Food @ Schools Presentation Slides:**

LYF@S:
resentation Slide

3. **Love Your Food @ Schools: Food Waste Reduction & Recycling Resource Kit**

http://www.cgs.gov.sg/docs/default-source/resources/hea-a4-lyf17a-2019-resource-kit_v9.pdf?sfvrsn=b41f6b0f_2

4. **Food Waste Reduction Poster**

Food Waste
Reduction

5. **Love Food. Don't Waste It Poster**

Love Food Don't
Waste It

6. **Love Food. Don't Waste It Wobblers**

Wobblers

EDUCATIONAL MATERIALS

7. Videos

Food Waste Reduction:
https://youtube.com/playlist?list=PLYekcPPnJa8YSqzqa9IzgOUY4nD-QTiRu

Food is Love. Don’t Waste It:
https://www.youtube.com/watch?v=JOGNLNFc8ys

Environment and Us:
https://youtube.com/playlist?list=PLYekcPPnJa8bKlYPuMGOwJg1_Km7V6tWZ

Zero Food Waste Challenge:
https://youtube.com/playlist?list=PLYekcPPnJa8awGvFMKNdWW6XrFe3MKMHR

INFORMATION SOURCES

1. **Websites**
   - NEA (https://www.nea.gov.sg)
   - CGS (https://www.cgs.gov.sg)
   - Towards Zero Waste (https://www.towardszerowaste.gov.sg)
2. **Videos (YouTube Channels)**
   - CleanGreenSingapore
   - Ministry of Sustainability and the Environment
3. **Social Media**
   - Facebook - National Environment Agency (NEA), Clean & Green Singapore, Ministry of Sustainability and the Environment
   - Instagram – @nea_sg, @msesingapore
   - Telegram - @NEA Singapore
4. **Mobile Application**
   - myENV app
5. **NEA Campaigns and Collaborations**
   - Stay updated on the latest developments from NEA. NEA will periodically inform schools on environmental campaigns via electronic direct mailers and social media. Schools may contact NEA for more information.

Our Environment

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