



SAY YES TO WASTE LESS ACTIVITY GUIDE

ACTIVITY

Regrowing Food Scraps
to Reduce Food Waste

LEVEL

Upper Primary



Duration



Instructions



Resources

Pre-activity
(1 to 3 days before)

- The activity can be led by a teacher or Green Club members to guide their fellow students, fostering leadership skills and stronger bonds among the students.
- If led by a student, the teacher will serve as a facilitator during the activity.
- Students to bring either a cup or bowl as well as at least 2 types of vegetable food scraps (the bottoms of leafy and root vegetables, and the stems and leaves of herbs) from home to class. For example:
 - **Leafy vegetables that grow in heads**, such as celery, lettuce or bok choy.
 - **Root vegetables**, such as green / white onion, turnip or beets.
 - **Herbs**, such as basil or mint.

Introduction
(15 mins)

- Share the objective of today's activity: to learn that there's always a personal price to waste, and how we can all play a part in keeping Singapore clean and green.
- Share these two wasteful facts to explain why it's important to reduce waste:
 - **WASTEFUL FACT #1**
 - Singaporeans wasted **813,000 tonnes of food** in 2022. That's the same as 2 bowls of rice per person per day.
 - **WASTEFUL FACT #2**
 - Singaporeans discarded **265 million kg of disposables** in 2022. That's equivalent to 500 Olympic-sized swimming pools or 5,300 4-room HDB flats.
 - When we use disposable containers when taking away food, we don't just harm the environment - we also waste up to \$550 a year. That's almost 11 trips to Universal Studios.
 - And throwing away side dishes we can't finish costs us up to \$1,100 a year. That's nearly 1,000 blox fruits!
 - One way is to regrow vegetable food scraps that we would normally dispose of. It's easy to do at home, and may help reduce your grocery bill in the long run too.
- By making small changes to the way we live, we can help make Singapore cleaner and greener. It's as simple as saying **YES** to reducing our use of disposable and saying **YES** to reducing food wastage.

Scissors
Paper
Pens
Double-sided tape
Either a cup or bowl
Sufficient tap water to fill half of the cup or bowl

Activity
(30 mins)

- Give an overview of the activity: to regrow at least two vegetable scraps and reduce food waste.
- Students will be divided into groups, depending on the type of vegetable scrap they brought to class.
- The teacher/green club members will then guide each group with the help of the instructions listed on [pages 4-5](#).

Duration**Instructions****Resources**

Review
(15 mins)

- Remind the class to look after the plants by watering them regularly.
- Select a few students to share their plant scraps and experiences with the rest of the class:
 - i. Was regrowing fun?
 - ii. Is this something they might want to continue doing at home? Why or why not?
- Then ask the class for more ideas on how they can reduce food wastage in their everyday lives.

Refer to [Annex](#) for more tips on reducing disposables and food wastage.

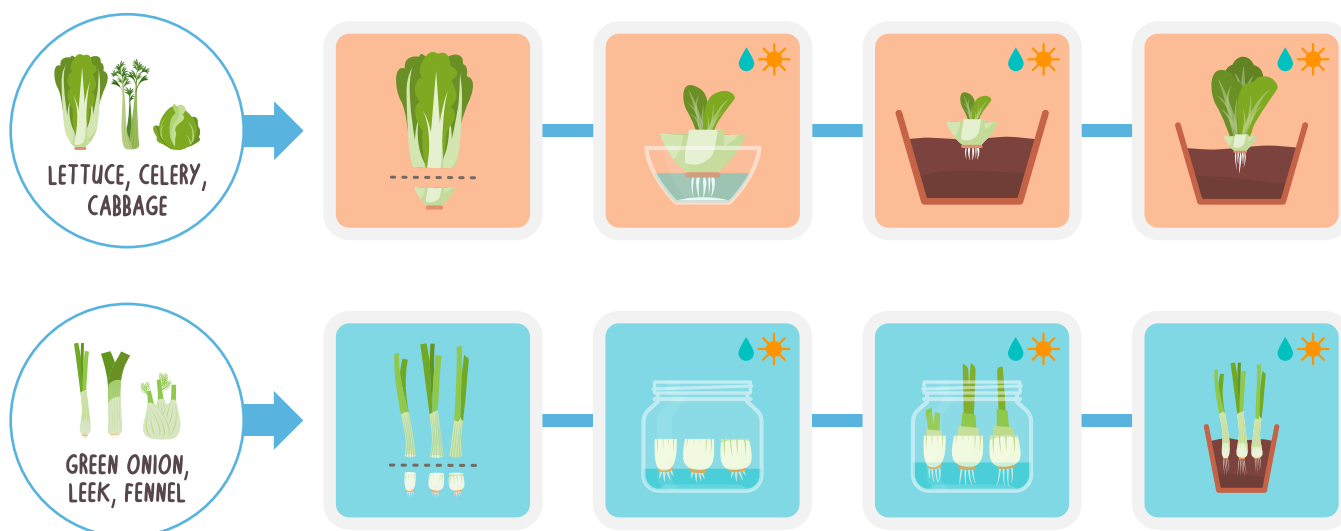
For more information and actionable tips, visit [Clean and Green Singapore](#).

Show off your students' masterpieces! Share photos and/or videos and tag @cleanandgreensg with #SayYESToWasteLess.

ACTIVITY INSTRUCTIONS

LEAFY AND ROOT VEGETABLES

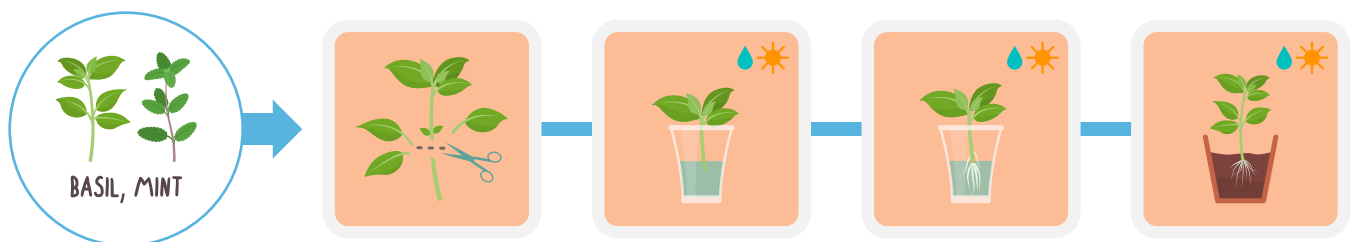
- 1 Using scissors, cut away the base of the root vegetables so you have a piece of about 2.5cm tall.
- 2 Place the base in a shallow container, then fill it with water till it reaches halfway up the plant.
- 3 Place it near the window, where it can get natural sunlight every day.
- 4 Change the water every 1 to 2 days to keep the water fresh and to prevent mosquitoes from breeding in it.
- 5 In a week or two, roots will emerge. Once the roots are about 2.5cm long, transplant the plant into a container filled with soil. Make sure to keep the leafy top above the soil.
- 6 You may harvest the vegetable by cutting the leaves.



ACTIVITY INSTRUCTIONS

HERBS

- 1** Using scissors, snip the herb below a node (the part of the plant where the leaf emerges from the stalk)
- 2** Place the herb in a container filled with water, and next to a window where it can get natural sunlight every day.
- 3** Change the water every 1 to 2 days to keep the water fresh and to prevent mosquitoes from breeding in it.
- 4** In a week or two, roots will emerge. Once the roots are about 2.5cm long, transplant the plant into a container filled with soil.
- 5** You may harvest the herb by snipping or pinching the tops where new leaves are growing.
- 6** In a week or so, there should be new growth at other nodes. Continue harvesting only the tops to keep the plant alive.



MORE TIPS ON WHAT WE CAN DO TO WASTE LESS

- Tips to reducing disposables

1. Opt out of disposables where possible (e.g., when ordering online / in-store, decline cup holders, cutleries and straws for takeaways)
 - a. Use your own reusable cutlery
 - b. Use your own reusable drink carrier
2. Bring your own reusable bag
 - a. Leave reusable bags near your home entrance or keep some in personal bags
 - b. Refuse bags if items can be carried in hands / pockets / personal bags
3. Bring your own bottle when ordering drinks for takeaway
4. Bring your own container for takeaway meals or snacks
5. Find alternative ways to bag trash instead of using plastic bags (e.g., reusing plastic wrapping, paper bags, yogurt tubs)

- Tips to reducing food wastage

1. Prevent and reduce food wastage at the source
 - a. Make a shopping list and keep to it
 - b. Keep near-expiry food items within easy view
 - c. Store excess food properly to avoid wastage
 - d. Ask for less rice / noodles if you can't finish them
 - e. Say 'no' to side dishes you don't eat
 - f. Give ugly fruits / veggies a chance, and save money at the same time as they're usually discounted
2. Redistribute unsold / excess food
 - a. Donate safe and edible food items that you no longer wish to consume
3. Repurpose / recycle / treat food waste
 - a. Repurpose food waste (e.g., using odds and ends of veggies to make soup stock or other dishes)
 - b. Recycle food wastage through community food waste recycling programmes or food compost bins

THE MATH BREAKDOWN

Interested in how we calculated the price of waste? You'll find our math breakdown below.

DISPOSABLES

Disposable Container

Cost of 1 takeaway container = \$0.50
3 meals a day x \$0.50 = \$1.50
365 days a year = **\$547.50**
(rounded up to \$550)

Cost of 1 ticket to USS = \$50
Number of trips: $(550 / 50) = 11$ trips

Disposable Bag

Current plastic bag charges:
\$0.05 per bag for supermarkets
\$0.50 to \$0.10 for other retailers

4 bags for a large grocery run = \$0.20
1 bag for small grocery run = \$0.10
2 bags for non-grocery run = \$0.20

A month of 4 large + 12 small + 2
non-grocery = \$2.40

12 months a year = **\$28.80**
(rounded up to \$30)

Cost of 1 rocket fruit (cheapest blox fruit)
= 60 robux
1 robux = 1.85¢
60 robux = \$1.11

Number of blox fruits = $(30 / 1.11) =$
27.02 blox fruits

FOOD WASTAGE

Extra Side Dish

Cost of side dish at fast food outlets =
\$3 to \$7 (using the upper bound figure)

3 times a week = \$21
52 weeks a year = **\$1,092**
(rounded up to \$1,100)

Cost of 1 rocket fruit (cheapest blox
fruit) = 60 robux
1 robux = 1.85¢
60 robux = \$1.11

Number of blox fruits : $(1,100 / 1.11) =$
990.99 blox fruits

Expired Groceries

1 in 3 Singaporeans throw away more
than 10% of food weekly. That works
out to throwing away an average of
\$258 worth of unconsumed food a year.
\$342 million of wasted food a year.
Using MAS's inflation calculator, \$258 in
2019 would cost **\$297.01** in 2023.
(rounded up to \$300)

Cost of 1 movie ticket = \$7

Number of movie tickets : $(300 / 7) =$
42.8