

Waste-free lunchbox

Student activities and games instruction guide



Background information

This guide provides activity and game instructions for educators to use with students from kindergarten to Year 8. It complements the **Waste-free lunch toolkit** which supports schools to run a waste free lunch campaign.

A waste-free lunchbox contains no single-use packaging which ends up in landfill. Food and drinks are packed in reusable containers within a reusable lunchbox (or bag) and can be taken home, washed and used again. All containers are resealable so that leftover food and drink can be consumed or composted later.

Pack a waste-free lunch

PACK:

- Snacks in reusable containers
- Drinks in a reusable bottle
- Reusable utensils
- A reusable lunchbox



Don't be wasteful

AVOID:

- Plastic bags, wrap and foil
- Disposable drink boxes and bottles
- Disposable forks and spoons
- Pre-packaged single-serve snacks



Learning objectives

After completing these activities students will be able to:

1. Record the quantity and types of packaging found in school lunchboxes.
2. Identify why we should try and avoid sending waste to landfill.
3. Identify actions they can take to avoid creating waste in their lunchboxes.

Student safety

- For sun protection, conduct activities in a classroom or in a covered (or shaded) area.
- For the relay activity, ensure there is a space clear from obstructions available.

Sensitivity warning

Use teacher judgement on how best to run this activity to ensure individual student situations are not highlighted. To avoid drawing attention to those without lunches, the lunch box audit activity can be run in pairs or small groups.

Resources required to complete all activities

- Two display lunchboxes, 1 x wasteful & 1 x waste-free (real items or photos – appendix 1)
- Pictures of landfill (appendix 2)
- WasteSorted Schools monster posters (appendix 3) and waste icons for the waste sorting activity (appendix 4)
- Student lunchboxes before recess (one lunchbox per student or one per pair/small group, if more appropriate)
- Lunchbox data collection sheet (appendix 5)
- Group totals sheet (appendix 6)
- Whiteboard or graph printout and quick tool (appendix 7)
- Pictures of lunchbox food items (appendix 8)
- One empty lunch box per relay team
- Data from page 26 of the **Waste-free lunch toolkit**
- Waste-free lunchbox board game (appendix 10) printed as A3
- Dice
- Counters – consider making your own from bottle top lids and put waste icons on them (appendix 11)

Note: Consider laminating pictures of lunchbox food items and board game, if activities will be repeated for multiple classes.

Overview of Contents

The Waste-free lunchbox activities are outlined below. Teachers can choose from these activities according to the ability levels of their students and the time available.

Activity	Suggested times	Page
1. Introduction – Wasteful or waste-free? Students will compare two lunchboxes, one with a lot of waste and one that is waste-free. They will discuss the various types of packaging materials they can see and what happens to them once they have been used.	10 minutes	7
2. Sorting your waste Students will discuss the different waste options at their school to set the scene and to understand the issue of waste going to landfill.	10 minutes	7
3. Lunchbox data sort Students will examine their own lunchboxes and list and tally the types of packaging materials they find. They will decide if each type of packaging is reusable, recyclable or destined for landfill. Students will plot the data they have collected onto a whole class graph.	20 minutes	8
4. Examine lunchbox data Students will interpret and extrapolate the data to show the quantities for a week, term and school year.	20 minutes	8
5. Calculate cost savings Students will use the information provided in the Waste-free lunch toolkit, or their own research, to calculate the cost savings over a year of packing a waste-free lunchbox.	20 minutes	9
6. Waste-free lunchbox relay Students will engage in a relay race to pack a lunchbox as quickly as possible dependent on their choices.	20 minutes	9
7. Waste-free lunchbox pledge Students will make a pledge on how they can try to reduce one type of packaging that is destined for landfill.	10 minutes	10
8. Consolidation: Waste-free lunchbox board game Students work their way around the board to pack their own waste-free lunch. Students can make their own counters by gluing icons onto bottle top lids (appendix 11).	20 minutes	10

Appendices	Page
1. Wasteful or waste-free lunchbox images	12
2. Landfill site images	15
3. WasteSorted Schools bin characters	16
4. Waste sorting icons	23
5. Lunchbox data collection table	25
6. Class totals table	26
7. Graphing results	27
8. Waste-free lunchbox relay items	29
9. Pledge template	42
10. Waste-free lunch board game	43
11. Waste-free lunch board game counter icons	44

Waste-free lunchbox activities



Activity 1:

Introduction – wasteful or waste-free?

1. Show students two different lunchboxes (appendix 1).
2. Discuss that these lunch boxes can be described as wasteful or waste-free. What is the difference between them?
 - Wasteful lunchboxes use single-use packaging that results in a lot of waste – after we have eaten our food, we put the empty wrappers in the bin.
 - Waste-free lunchboxes use reusable packaging that result in little to no waste - after we have eaten our food, we put the containers back in our bags to wash and use again tomorrow.

Discussion questions:

- Why do we use wrapping or packaging?
- What is the packaging made from?
- Can the packaging be avoided, re-used or recycled?
- Where do these items go when we are finished with them?

Activity 2:

Setting the scene – sorting your waste

1. Discuss the different waste sorting options available at school using the corresponding WasteSorted Schools monsters (appendix 3).
2. Show the students the waste icons one at a time (appendix 4).
3. Select different students to come forward and attach the icons to the correct monsters.
4. Discuss with the students how there could be more than one correct answer. For example, fruit scraps could go in compost, a worm farm or a FOGO bin (Food Organics, Garden Organics), depending on what options are available at your school.
5. Discuss how the options at home and at school can be different. For example, at school paper could go in a paper recycling bin but at home it could go in a commingled recycling bin, if this is an option in your area.
6. Show students the **What happens to rubbish** video or images of a landfill site (appendix 2).
7. **Think-pair-share:** What do you think are some of the negative impacts of a landfill site?

Some reasons are:

- The creation of landfill sites requires the destruction of natural habitats.
- The items we send to landfill can take hundreds (or thousands) of years to break down, essentially meaning they will stay in a hole in the ground forever.
- A lot of birds and other animals live on landfill sites and eat what they find there. Often, they eat items made from plastic, glass or metal that they cannot digest, and it ends up killing them.
- Food waste that gets sent to landfill releases methane gas. Methane gas is a greenhouse gas that contributes to climate change.



Activity 3: Lunchbox data sort

Note: This session needs to be run before recess.

Students are asked to bring their own lunchbox with them. This can be run with one lunchbox per person, one lunchbox between a pair or one lunchbox for a small group, depending on the needs of the class.

1. Instruct students to look at the contents of their lunchbox and the types of packaging it contains.
2. Using the lunchbox waste data recording sheet (appendix 5), ask students to record and tally each item in their lunchbox to show if the packaging is reusable, recyclable (including compostable) or destined for landfill.
3. Ask students to share their totals for the different categories. These totals can be recorded using the class totals worksheet (appendix 6).

Discussion questions:

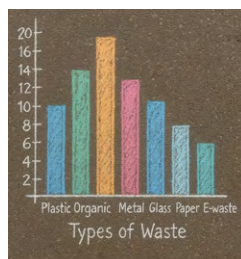
- What was the most common packaging found in our lunch boxes?
- What was the second most common?
- How is our class going with re-usable items in our lunchboxes? Could we do better?
- What could we do to replace yoghurt tubs? Juice boxes? Small packets of chips?

Answer: Buy in bulk

Activity 4: Examine lunchbox data

Interpreting the data

1. Transfer the data that has been collected in activity 3 onto a graph (appendix 7).
2. If done outside, you could choose to set this up as a pavement chalk graph or a floor model using string and category labels to form columns and bottle top lids to represent the total numbers of packaged item types in students lunchboxes.
3. Take a photo of the graph when finished and discuss the results.



Extrapolating the data

1. Using the data that has been collected during activity 3, calculate the total number of snack wrappers, zip lock bags, cling wrap, etc., destined for landfill from the class for a week, a term and a school year.

Use the quick tool (appendix 7) below in small groups to help students calculate these numbers.

Totals: Plastic snack & chip wrappers		
Week =	Term =	Year =
Totals: Plastic containers		
Week =	Term =	Year =
Totals: Juice boxes & single use water bottles		
Week =	Term =	Year =

Discussion question:

- How can we do better?

2. Take it further by calculating these totals for the whole school.
3. Take it even further by calculating these totals for the whole State (there are about 1,190 schools in WA as of December 2024).

Activity 5: Calculate cost savings

1. Use the information on page 26 of the **WSS Waste-free lunch toolkit** - to work out the estimated yearly savings from packing a waste-free lunchbox.



Packing a waste-free lunch is cost beneficial:

An average waste-free lunch

\$1.88 / day

\$9.40 / week

\$386.56 / school year

An average disposable lunch

\$3.98 / day

\$19.90 / week

\$784.06 / school year

Activity 6: Waste-free lunchbox relay

Note: For schools that provide their students with school lunches, this activity can work using a lunch bag that students are familiar with, instead of a lunchbox.

1. Explain to the students that they are now going to be doing the waste-free lunchbox relay.
 2. Divide the class into teams and put the pictures of lunchbox items (appendix 8) out where they can be seen. Each student can pick one item to go in their team's lunchbox.
- Note: DO NOT explain the numbers at this selection stage.**
3. After they have made their choices, inform the students that the type of waste their item creates impacts how long it will take to get it into the lunchbox.
 - If their item is in a reusable container or is made from organic material that can be composted e.g. banana peel (labelled number 1), they only need to walk to the lunchbox once before their picture can be placed inside.
 - If their item uses packaging that can be recycled (labelled number 3) they need to walk to the lunchbox and back three times before their item can be placed inside.
 - If their item has packaging that is destined for landfill (labelled number 5) they will have to walk to the lunchbox and back five times before their picture can be placed inside.
 4. Take the students to a space, free from hazards, and run the relay race.
 5. Place each teams' empty lunchbox (or bag) open at the far end of the relay space for them to put their item in when they have walked the number of allocated laps.
 6. After the race, discuss the different items people chose and how many laps they had to walk before placing their item in the lunchbox.
 7. If time allows, students can choose another item and do the relay again.
 8. Compare their choices for the second round and see what was different.

Discussion question:

- Could they still have an item they wanted to eat without creating waste that would end up in landfill?

Activity 7: Waste-free lunchbox pledge

1. Ask students to consider what changes they could make to reduce the amount of waste going to landfill from their lunchboxes.
2. Direct students to complete the pledge worksheet (appendix 9) by recording what they would like to change to make their lunchbox more waste-free. This pledge can be shared with parents to continue the discussion at home.

Activity 8: Consolidation: Waste-free lunchbox boardgame

1. Print out the board game (appendix 10) at A3 size to share between 2-6 students.
2. Students work their way around the board by throwing the dice and following the instructions.
3. As they land on each cobblestone, they get further or closer to claiming waste-free lunchbox status, depending on the choices they have made.

Note: Six students maximum per board. Students can make their own counters from bottle top lids with waste icons stuck to them (appendix 11).

Appendices



1. Waste-free or wasteful lunchboxes



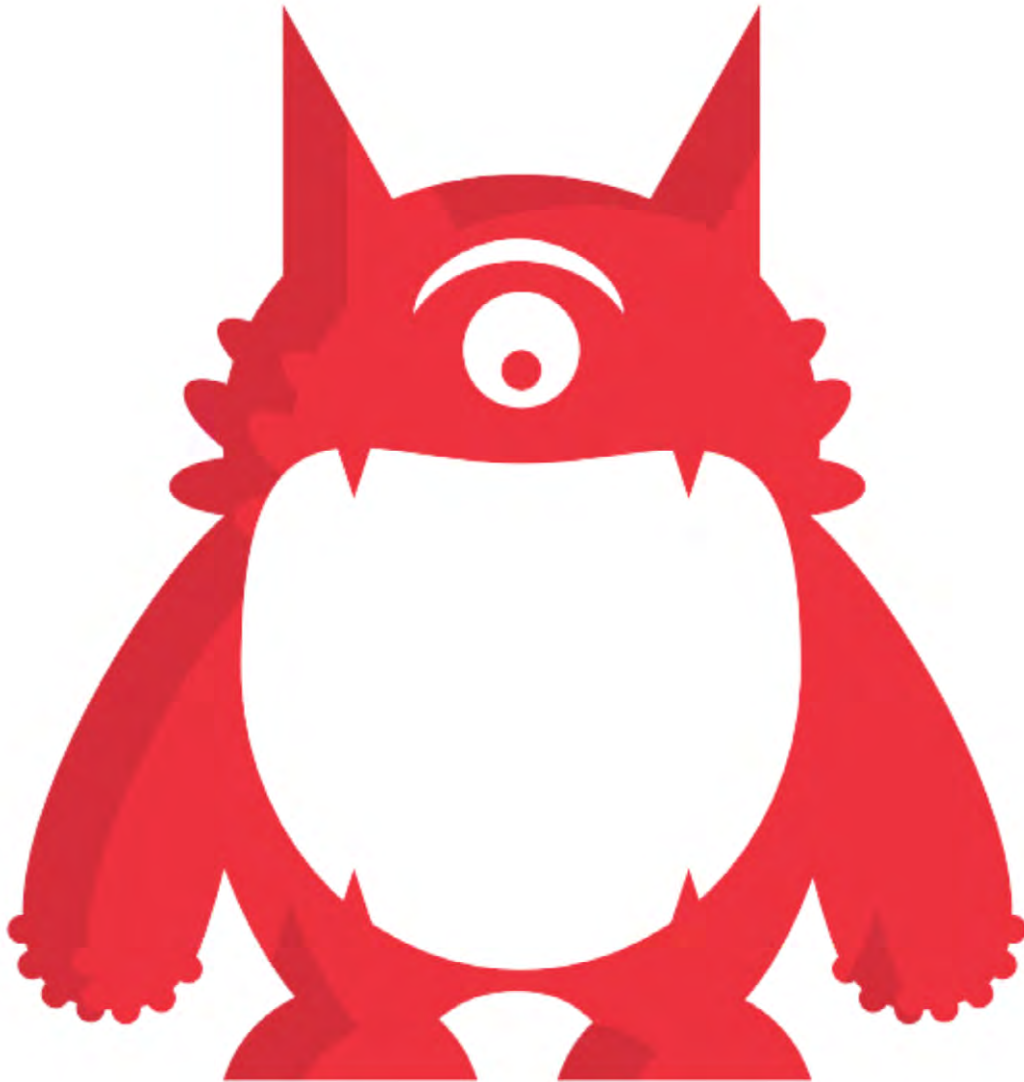




2. Landfill site images

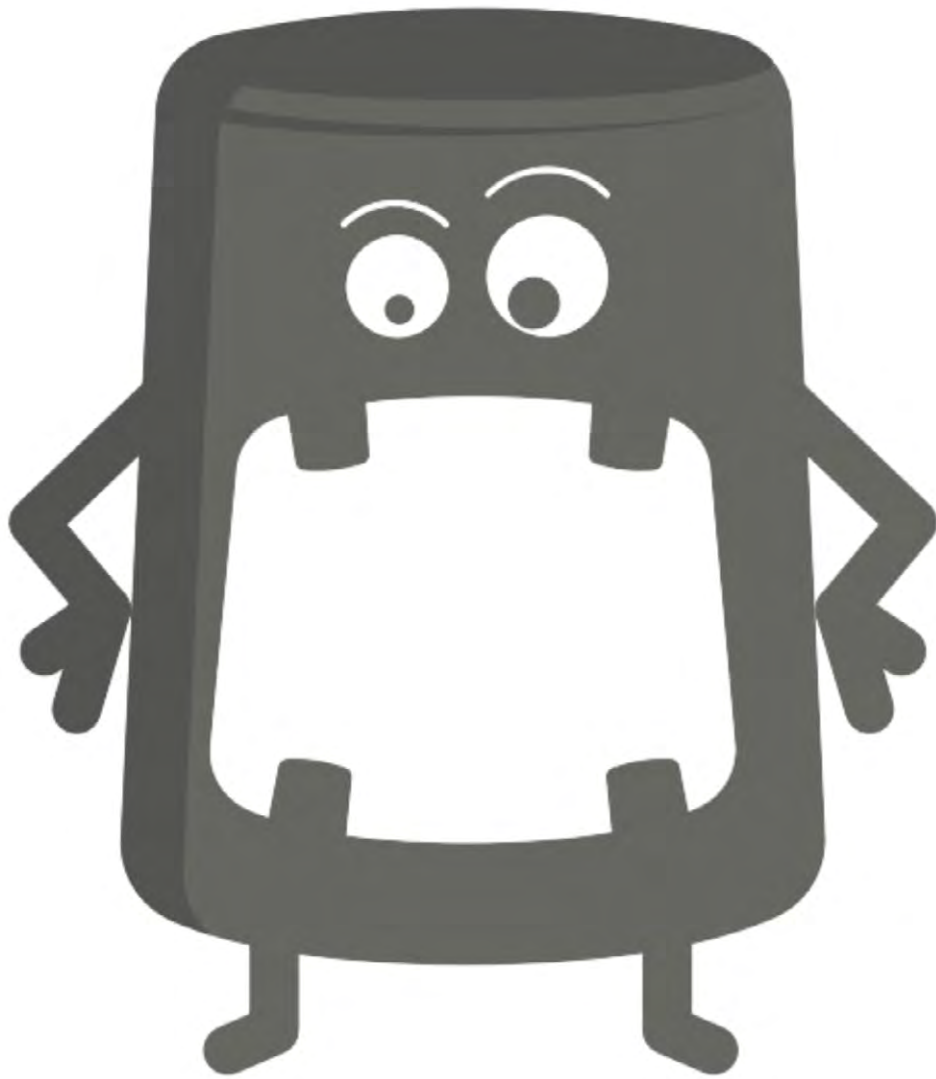


3. WasteSorted Schools bin characters for sorting



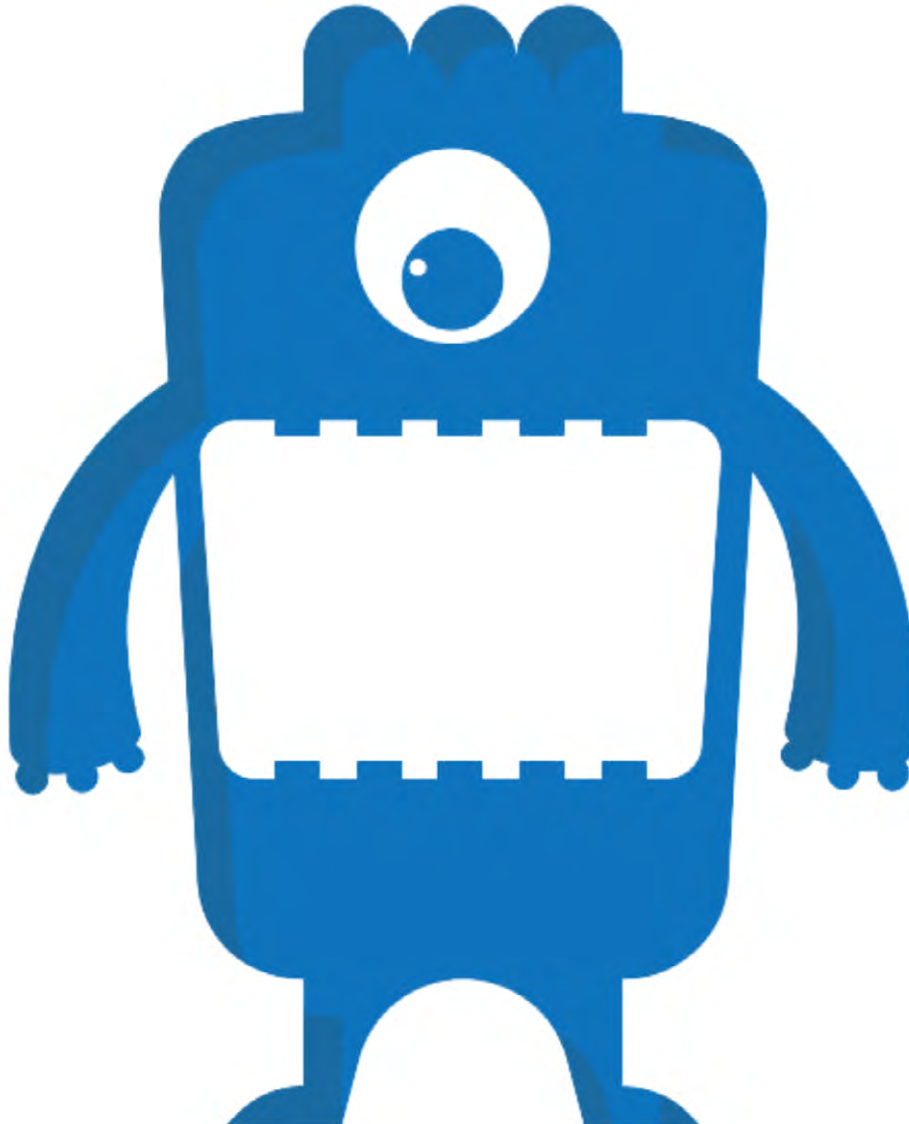
**I'll eat what didn't
go in the other bins.**





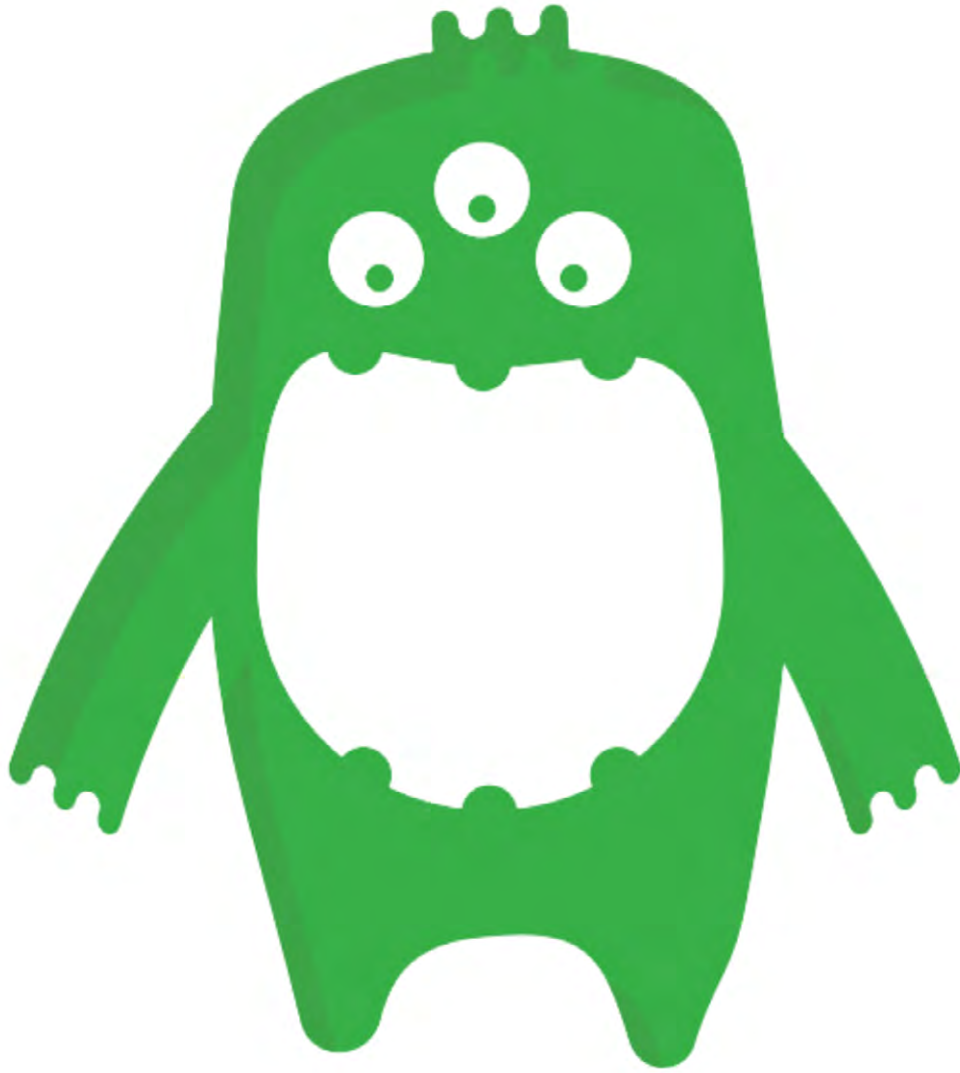
**Feed me your fruit
and veggie scraps.**





**I munch on things
made of paper.**

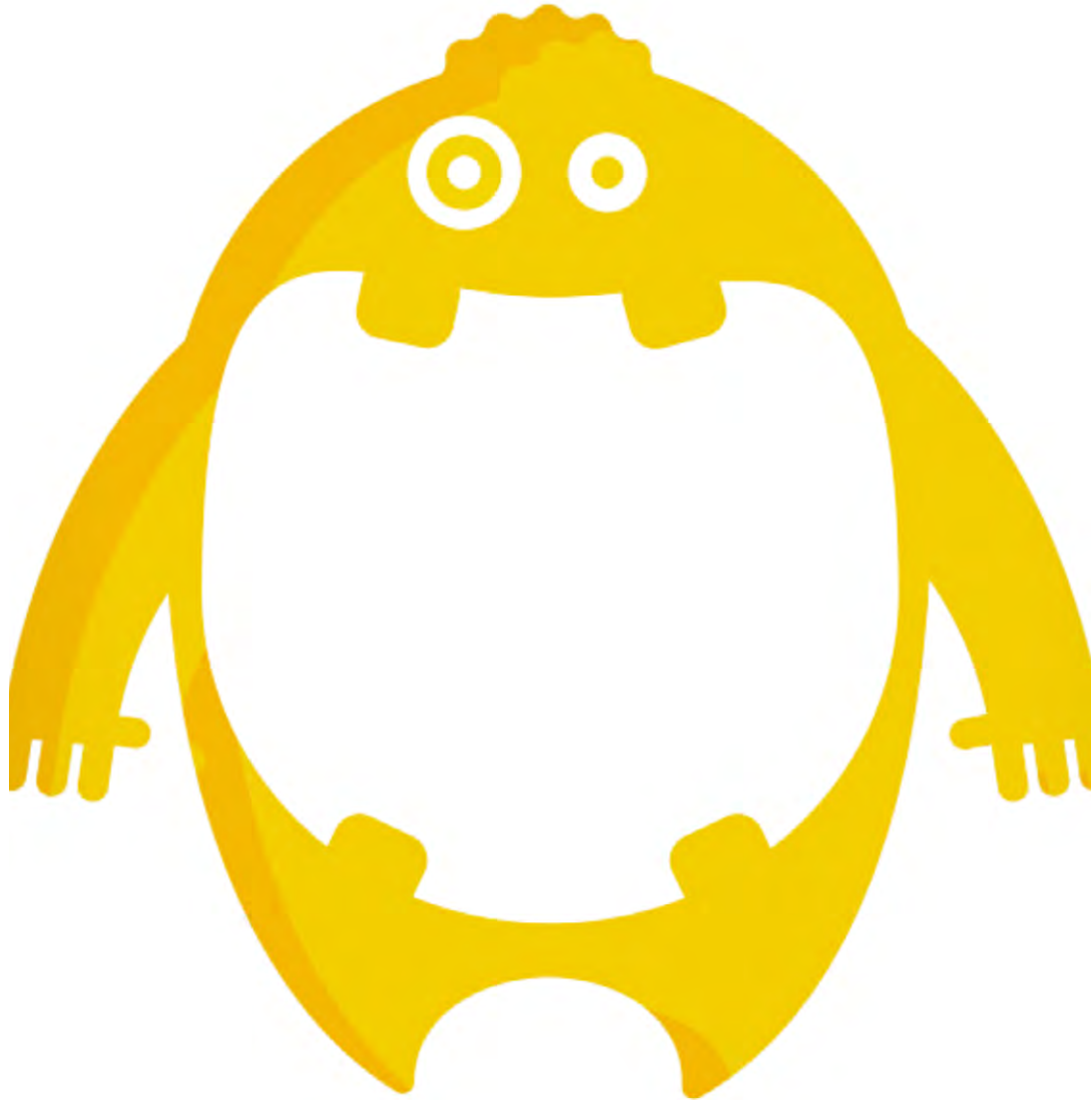




**What you don't chew,
I do.**



Teacher note: WasteSorted Schools recommends keeping recycling bins in the classroom and away from student eating areas to avoid contamination. Students should be encouraged to bring recyclable containers home, rinse them out, then place them in their home recycling bin.



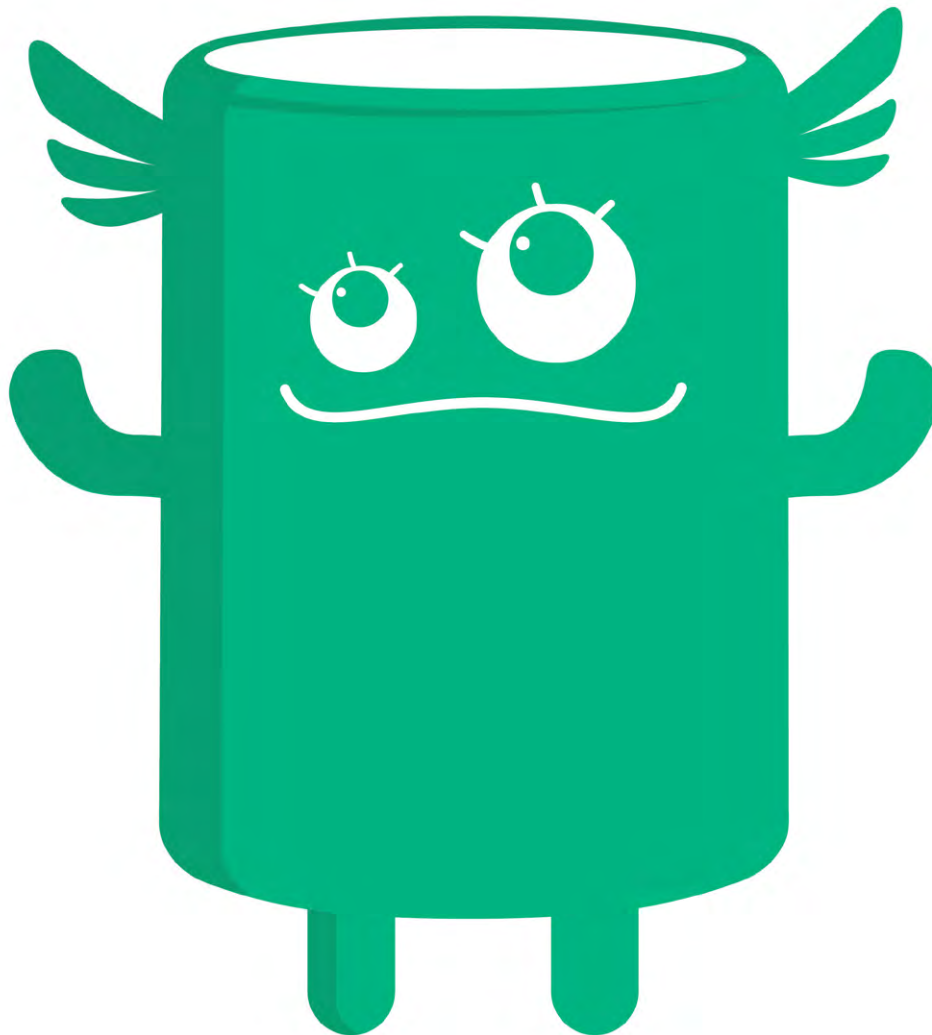
**I want to gobble up
your recycling.**





**We snack on your fruit
and veggie scraps.**





**Please give me
your 10¢ containers.**



4. Waste icons for sorting





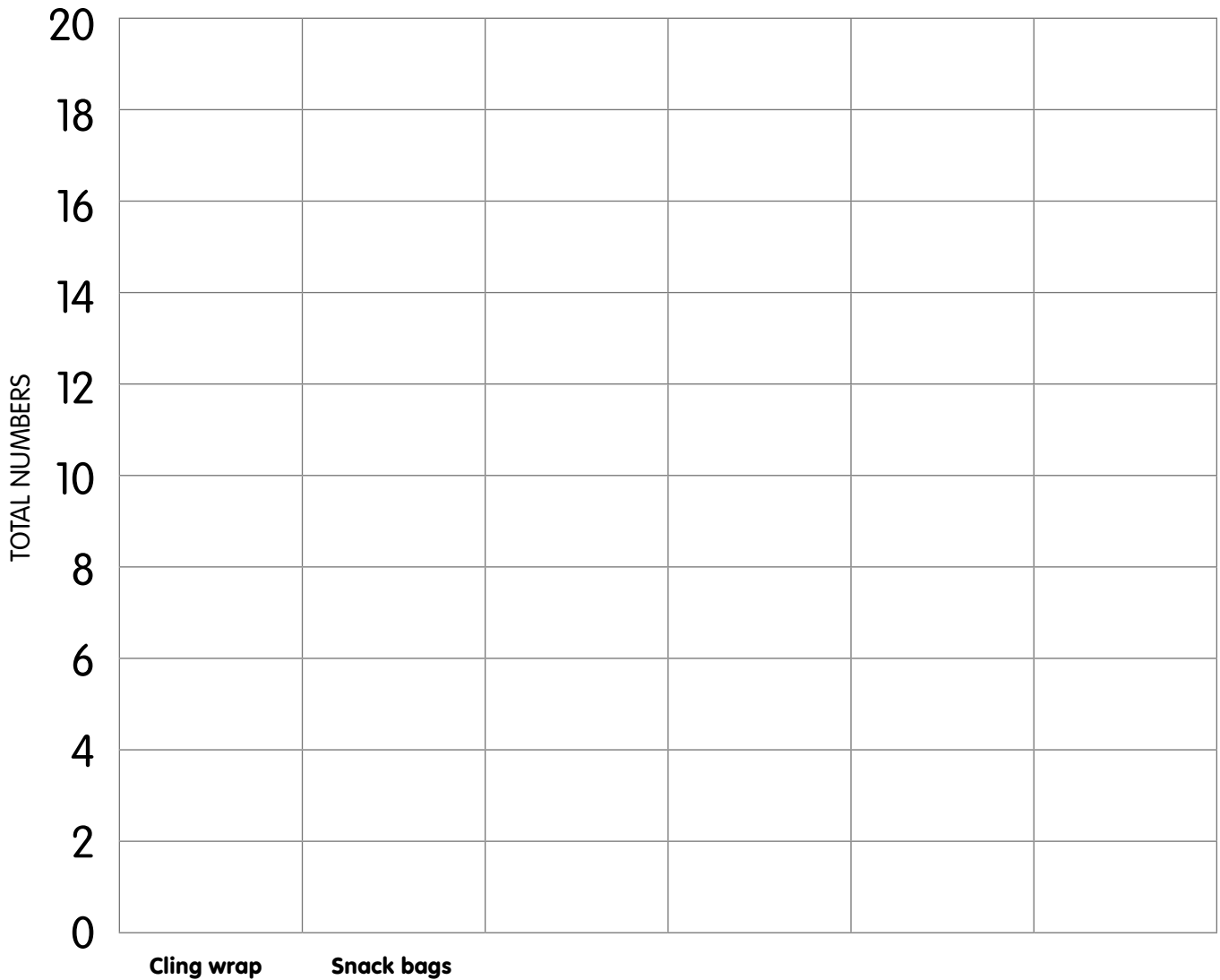
5. Lunchbox waste data collection

Type of packaging	Tally	Reusable	Recyclable/ Compostable	Landfill
Plastic wrap (cling film)				
Plastic snack bags, chip packets or muesli bar wrappers				
Plastic yoghurt pouches				
10c containers (juice boxes, drink bottles, cans)				
Aluminium foil or tins				
Plastic containers (yoghurt tubs, fruit cups, etc.)				
Reusable containers (e.g. a washable plastic container from home)				
Reusable wraps (e.g. beeswax wrap)				
Paper				
Fruit peels				
Cardboard				
Other				

6. Class totals table

	Class results										
Items	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10	Total
Plastic wrap (e.g. cling film)											
Plastic snack bags, chip packets or muesli bar wrappers											
Plastic yoghurt pouches											
10c containers											
Aluminium foil or tins											
Plastic containers (e.g. yoghurt tubs, fruit cups, etc.)											
Reusable containers (e.g. a washable plastic container from home)											
Reusable wraps (e.g. beeswax wrap)											
Paper											
Fruit peels											
Cardboard											
Other											


7. Graphing our results



Teacher note: Students are to insert their own labels for waste type as per these examples.


WASTE TYPES

Graphing our results – quick tool

Totals: Plastic snack & chip wrappers
Week = Term = Year = 


Totals: Plastic containers
Week = Term = Year =

Totals: Juice boxes & single use water bottles
Week = Term = Year =

Totals: Plastic snack & chip wrappers
Week = Term = Year = 

Totals: Plastic containers
Week = Term = Year =

Totals: Juice boxes & single use water bottles
Week = Term = Year =

Totals: Plastic snack & chip wrappers
Week = Term = Year = 

Totals: Plastic containers
Week = Term = Year =

Totals: Juice boxes & single use water bottles
Week = Term = Year =

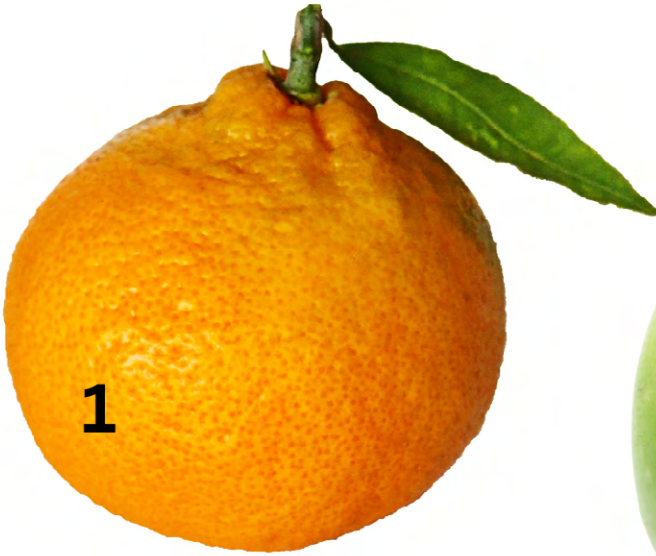
8. Waste-free lunchbox relay items











1



1



1



5

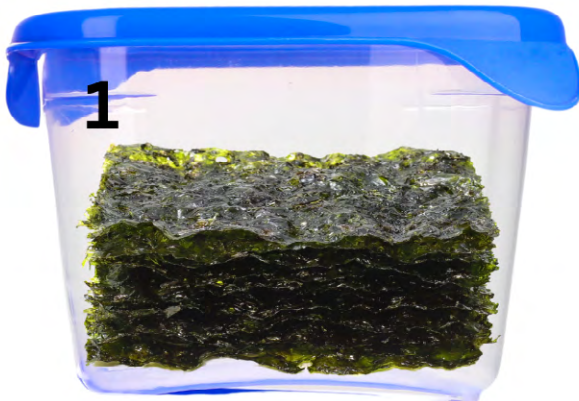
















9. Making a pledge

✂ Cut along the dotted line

 <p>My waste-free lunchbox pledge is</p> <hr/> <hr/>
 <p>My waste-free lunchbox pledge is</p> <hr/> <hr/>
 <p>My waste-free lunchbox pledge is</p> <hr/> <hr/>
 <p>My waste-free lunchbox pledge is</p> <hr/> <hr/>

10. Waste-free lunch board game

I pack a waste-free lunch

How to play
Use your counter to travel the board by packing a waste-free lunch for school. Throw the exact number to finish.

Start

1

2

3 No wrappers in your lunch box. Go ahead 10 spaces.

4 Eek... your sandwich is in a zip lock bag today. Move back 2 spaces.

5

6

7 Yay... you put your apple core in the compost not the general waste bin. Move forward 7 spaces.

8

9

10 You wrap your lunch in foil today and scrunch and throw it in the recycle bin. Move back 2 spaces.

11

12 You brought a single serve juice box rather than a reusable water bottle. Go back 7 spaces.

13

14

15 Nature provides its own wrapping so you left your fruit unpackaged. Move ahead 3 spaces.

16

17

18

19 You put your yoghurt in a reusable container. Move forward 3 spaces.

20

21 You pack leftovers but throw away the reusable containers. Move back 7 spaces.

22

23 You remembered to give your banana a skin to the worms. Move to space 27.

24

25

26 You buy a box of crackers and bring some in a small container. Move forward 2 spaces.

27

28

29 You brought homemade biscuits in a beeswax wrap today. Move to the finish line.

Finish

I pack waste-free lunches

GOVERNMENT OF WESTERN AUSTRALIA

WASTE AUTHORITY
WASTE... TOO GOOD TO WASTE

Wastesorted Schools

11. Waste-free lunch board game counter icons



WasteSorted Schools

www.wastesortedschools.wa.gov.au

