

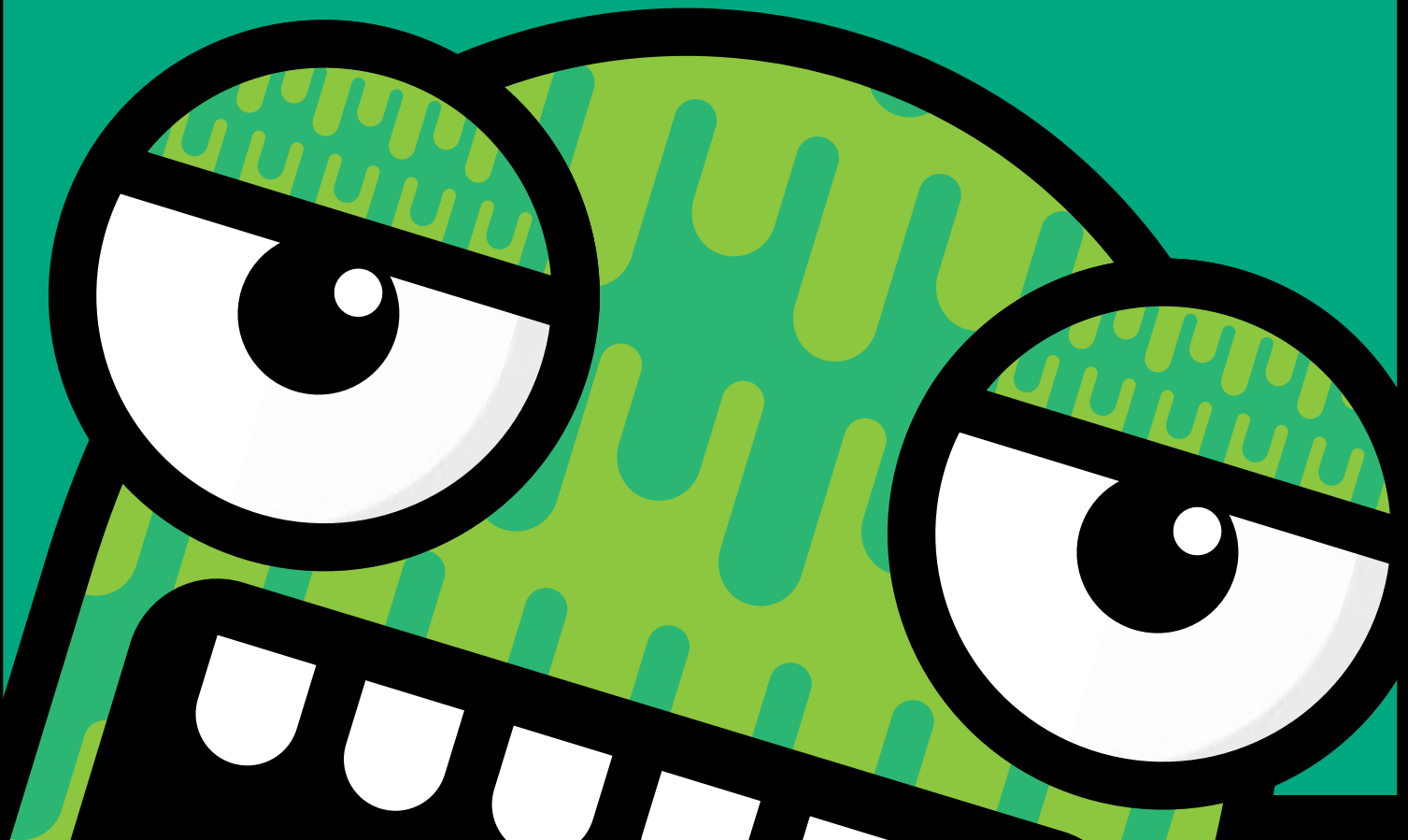


CITY OF  
TEA TREE GULLY  
*Naturally Better*

# LIFT THE RIGHT LID

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Primary lesson ideas  
[cttg.sa.gov.au/waste](http://cttg.sa.gov.au/waste)



# Primary waste education resource

Every year South Australians generate millions of tonnes of waste. This includes food, plastic packaging, clothing and more. So what can we do?

This resource provides a range of Australian curriculum-aligned waste and recycling lesson ideas, as well as fun hands-on activities that you can do with your students in the classroom. They have been developed for primary students, but can easily be modified to suit other year levels.

The lessons and activities are designed to introduce students to the waste management system and foster a better understanding of the importance of correct waste disposal and the greater impacts of incorrect waste disposal.

Students will also be introduced to terms like reduce, reuse and recycle, discover which items go in which bin, and will be encouraged to consider how they can reduce the amount of waste they create both at school and at home.

Adult supervision is recommended for all activities.

## Lesson ideas

1. Geography
2. History
3. Civics and citizenship
4. Economics and business
5. Science
6. Design and technology
7. Health and physical education
8. Mathematics
9. English
10. The arts
11. Languages

The worksheets referred to in the waste education lesson ideas are included in the lower primary work sheets document on [cttg.sa.gov.au/wasteeducation](http://cttg.sa.gov.au/wasteeducation).

# Waste education lesson ideas

## 1. Geography

- **Where does it go?**

Do your students know which bin to put common household items in? This activity is designed to test their knowledge and can be conducted in a number of different ways. The 'which bin' activity sheet is a great place to start. You may like to use the [which bin](http://whichbin.sa.gov.au) website. The A-Z listing provides a great research tool. Students may wish to have an adult at home try this activity too.

[whichbin.sa.gov.au](http://whichbin.sa.gov.au)

After completing the activity sheet, ask your students to design a flyer to inform others about what can be recycled and how the items should be treated before they are placed in bins (for example. lids off, washed etc.). This flyer could be sent home or included in a school newsletter.

- **Waste management system redesign**

Students to review the waste management systems that they have in place at home (for example, who is responsible for the bins, do family members know what goes in each bin?). Students must decide if their family manages their waste effectively. If not, they should design a process that might improve it's effectiveness. This could also be applied to the classroom.

- **Sustainable waste management**

Students to research the waste management terms avoid, reduce, reuse and recycle. With an understanding of these terms, they should explore different ways of sustainably managing waste.

- **It can't go in my bin**

What should you do with items that cannot be safely disposed of using the three bin system? In small groups, students should select a number of hazardous items (for example, paint, electronics, batteries and printer cartridges) to investigate and report back to the class on what other options exist? You may like to use the [which bin](http://whichbin.sa.gov.au) website. The A-Z listing provides a great research tool.

[whichbin.sa.gov.au](http://whichbin.sa.gov.au)

- **Composting**

What is composting? Explore the concept of composting as a class and get each student to research two different methods (for example, compost bins, worm farms, and Bokashi buckets). They should select one of the composting method and explain how it would work in their homes.

Students should consider the organisation, time and equipment required as well as how they would get everyone in their family to participate.

- **Reduce my waste**

Waste management is not just about how we dispose of our waste, it means trying to reduce the amount of waste we produce in the first place. This could include avoiding waste and swapping single use items for reusable items.

By completing and signing the 'reduce my waste' activity sheet, students make a commitment to reducing the waste they produce for one term. This could be at home or in the classroom. At the end of the term, ask students to report on how they went. Did they succeed in reducing the amount of waste they create? Did they find it easy or hard?

- **Ways to reuse it**

As individuals or in pairs, students to select an everyday item or material that they (or their family) throw away a lot. Once they have selected an item or material, students complete the 'Ways to reuse it!' activity sheet and brainstorm as many ideas about how it could be reused as possible. Encourage your students to think outside the box and get creative.

- **Waste not**

As a class or in pairs, brainstorm a list of common grocery items. Examples could include toilet paper, soap, fruit and vegetables, bread and milk. In pairs, students must choose one of the items from the list and come up with different ways to avoid and reduce wastage of that particular item. Students should then be encouraged to share their ideas with the class.

- **Room for improvement**

As a class, read the student facts about household waste and recycling on the KESAB website. Then, explore the 'Stuff at home – put it in the right bin' interactive house to see which household items belong in each bin. This link also leads to 'Curriculum support' resources consisting of more lesson ideas and activity sheets.

[kesab.asn.au](http://kesab.asn.au)

- **What do others do?**

Students choose one or more countries with which they have a family connection and research and compare the household bin systems in those countries with the system they have. What are the similarities and differences between the bin collection systems in their chosen country and South Australia? Students should record their findings and report them back to the class.

- **Why is waste management important?**

Do you ever count the amount of waste you produce? Greater Jakarta, with more than 30 million people, sends more than 14,000 tons of waste to eight landfills every day.

As a class, review the information and watch the short video about one of the largest landfills in the world. After viewing the video discuss the many reasons why effective waste management systems is vitally important. Depending on the year level, split your students into small groups and ask them to debate the merits of having an effective waste management system.

[thejakartapost.com](http://thejakartapost.com)

## 2. History

- **Interview**

Has the way we manage waste changed? This activity requires students to interview either a parent or grandparent about waste and how it was managed when they were young. How much waste did they create and what did they do with it? Did they reuse or recycle? If so, what types of materials did they reuse or recycle and how? Students to record their findings and report back to the class.

As a class, discuss how this differs from how waste is managed now both at home and in the community? You may also like to encourage students to predict how waste might be managed in the future.

## 3. Civics and citizenship

- **Role of government in waste management**

As a class, watch the *Recycling Report* video. After the video, encourage students to discuss their feelings/opinions about the video. This is a great way to introduce the role of government in the waste management process.

What role does local government play in waste management? How does this differ from the role of State Government? Can the way the different tiers of government manage waste

be improved? And who's responsibility is it, Government or the recycling businesses that collect the waste?

When undertaking their research, students should explore the different roles of government and how policies and legislation impact current waste management practices. Think about the impact of the container deposit legislation (CDL) and the 10c plastic bag levy.

[abc.net.au/btn](http://abc.net.au/btn)

## 4. Economics and business

- **Business waste**

The items businesses produce and sell can take decades to break down in landfill. As a class, watch the fashion waste video to introduce the topic of business waste.

[abc.net.au/fast-fashion](http://abc.net.au/fast-fashion)

As individuals or in pairs, students to research what local businesses are doing to manage their waste. When undertaking their research, they should look at what businesses are doing to ensure their products don't end up in landfill.

- **War on packaging**

What role can consumers play in reducing the amount of product packing both in supermarkets and in retail outlets? Can consumers change the way products are packaged by favouring products with little or no packaging? Students to research the National Packaging Targets and the role of the Australian Packaging Covenant. Do you agree with them and do they go far enough?

[packagingcovenant.org.au/](http://packagingcovenant.org.au/)

- **Collectable controversy**

While it is big business for many of our big supermarkets it also creates a big issue when it comes to landfill. As a class, watch the *Supermarket collectable controversy* video and encourage students to discuss their opinions on this type of marketing. To extend the lesson, you could encourage the students to come up with a zero waste supermarket collectable that might achieve the same result for the big supermarkets.

[abc.net.au](http://abc.net.au)

## 5. Science

- **Resource recovery**

Which natural materials are used to make paper, glass, steel, aluminium and plastic? As a class, explore the concept of the use of raw materials in creating consumables, then ask students to choose an item and research what materials are used to make the product, how much of each material is used, and how those materials are sourced.

Each student should create a presentation (booklet, oral presentation, PowerPoint, poster etc.) which includes an explanation of the process of making the product as well as a list of benefits derived from recycling the product.

- **KWL**

As a class or individuals, students to complete the *KWL chart* activity sheet, detailing what they know about managing waste, what they want to know and what they are learning. You could use this to start your journey and guide your lesson plan. To track their learning outcomes, encourage students to add to the sheet after each lesson.

- **How quickly do I decompose?**

When food goes to landfill and starts to break down it produces methane, a greenhouse gas.

As a class, explore the terms 'Greenhouse gas' and 'methane' and the impact these gases have on the environment.

You may like to conduct an experiment to show how quickly a type of food decomposes under different conditions. For example, take several pieces of bread. Place one under a window, one inside a paper bag, bury one in the ground, and seal the other in a plastic bag (you may wish to conduct this experiment using zip lock bags and/or clear containers for all materials to avoid and/or limit exposure to mold). Alternatively, the experiment could compare the decomposition rates of different food items under the same conditions. What do the results mean for waste management (think about separating food and packaging before disposal)?

Analyse the results, take pictures and write a report. Students should make predictions using the '*Watch it waste*' activity sheet prior to commencing the experiment and use the document to record their data.

Gloves, masks, tongs and other safety equipment is recommended for both teachers and students involved in this activity.

[Video - How our food choices impact the environment](#)

- **Litter breakdown drag and drop**

Use the interactive '*Litter break down drag and drop*' game to test student's knowledge on how long some common litter items take to break down.

[kesab.asn.au/litterless/](http://kesab.asn.au/litterless/)

If your class does not have computer access, you can print the '*Litter break down cards*' and use them to explore how long common items take to break down. See lesson seven using the link below.

[kesab.asn.au/litterless/unit-of-work/](http://kesab.asn.au/litterless/unit-of-work/)

- **Product based waste management**

Do the physical properties of products affect the way they are managed as waste. Think about plastics for example, why are different plastics managed differently? Why can some plastics be recycled and others cannot? Is it because of their strength, toughness, odour or colour? You may also like to consider the processing methods that can be used.

- **Why does it matter?**

When it comes to throwing away items that we no longer need it is so important that we separate our waste in the right way. But why does what we put in each bin matter? The short answer to this question is that if we do not separate our waste when we are throwing it away, we are throwing everything directly into landfill.

As a class discuss why is it important to separate waste. As part of your discussion include the idea of contamination and what this means for waste management in their local area.

Following the class discussion ask students to collect data about the type of waste thrown out in their house and which bin each items ends up in. As part of their investigation, they should research what happens when waste items are placed in the wrong bin.

- **Feed your Mini Muncher**

Does your classroom have a Mini Muncher kitchen caddy? This activity is designed to engage students in the correct disposal of household organic waste such as food scraps, paper towel, used tissues and compostable packaging.

Using the *Feed your Mini Muncher kitchen caddy* activity sheet, ask students to draw items that they think should be put in the Mini Muncher kitchen caddy.

For more information on which items can be turned into compost visit [cttg.sa.gov.au/minimuncher](http://cttg.sa.gov.au/minimuncher)

## 6. Design and technology

- **The future of waste management**

What does waste management look like in the future? Split the class into small groups and ask the students to design a fully automated waste management system for 2030. What are the similarities and differences between the system we use today and the system the students have devised.?

- **Package redesign**

Why are products packaged in a certain way? Is all that packaging necessary?

Supermarket items come in many different types of packaging, including plastic, cardboard and metal. Ask students to select a common supermarket item and discuss why they might be packaged as they are. What properties do the packaging materials have that make them suitable for the product? If the packaging cannot be recycled, investigate and discuss alternative packaging for the product.

- **Product lifecycle**

Why is it important to put the right items in the right bin? As a class, explore the importance of disposing of waste correctly. Ask students to select and research the life cycle of a commonly used item (for example, a plastic water bottle). How is the product manufactured, marketed, distributed and

disposed of or recycled? Is the system a closed or open-loop system and what are the implications for the environment?

### **Mini Muncher redesign**

Students to use their imagination to design a new and innovative kitchen caddy based on the Mini muncher product from the Tea Tree Gully Council. Their design should be labelled, with the new features explained.

- **Mini Muncher redesign**

Redesign the Mini Muncher kitchen caddy. Students should think about where it is used, how it is used and the different types of waste it used to collect. What would you change? Draw your Mini Muncher and explain the new features and benefits. You may also like to have your students create a prototype using recycled materials.

- **Landfill PMI**

Australians produce large volumes of waste and much of it goes to landfill, but why are modern landfills designed and constructed in a certain way? What benefits does this have? And what makes a suitable and unsuitable location for such a facility?

To introduce the topic of landfill, as a class, watch the landfill videos listed below.

[Video - Reducing landfill waste](#)

[Video - Landfill](#)

Then ask students to research the design and construction of modern landfills. Students should look at the potential hazards posed by landfills and pose innovative solutions to deal with these issues.

Students can use the *Landfill PMI* activity sheet to records their ideas.

## 7. Health & Physical Education

- **Impacts of incorrect waste disposal**

If waste is disposed of incorrectly can it impact our health and safety? And what if we didn't have adequate waste collection and disposal services? What would happen?

Ask students to investigate the health risks associated with waste that isn't properly managed. Students should consider the impacts on individuals, society and the environment.

- **Healthy lunchbox challenge**

Is it possible to bring lunch to school without using disposable or single-use packaging? Challenge your students to create a week of healthy lunchbox options that create minimal waste. Students should think about how things are packaged and what will be left over after they have finished their lunch. Can it be composted or recycled?

To extend this lesson, students could create some low, or no waste lunch menus and display them around the classroom or school.

To introduce the topic you may like to show the two ABC videos listed below. The first is a video shows an example of what lunch boxes and their contents looked like in the 70's. The second, shows lunchboxes today and facts about bread.

[Video - What's for lunch](#)

[Video - Daily bread](#)

- **Waste not want not**

While food can be disposed of in the green organics bin and converted into nutrient rich compost, as a country we still throw away a huge amount of food.

Ask students to investigate and discuss how we can reduce food waste both at school and at home. As part of this topic, students should investigate the impact of proper storage and the concept of best before dates on food wastage.

Students might also consider preparing a

'foods we all like' list for their family to help ensure that food purchased will not be wasted. When preparing their list, students should include healthy foods and foods without packaging.

To extend the lesson, you might like to get students to create a campaign to promote food-waste reduction. The campaign could be rolled-out across the school.

- **Canteen audit**

As a class, conduct an audit of the school canteen. Students should look at how much waste do they create, if they recycle, and how the items they sell are packaged. After the audit, students should make a recommendation to the school on how the amount of waste the canteen creates can be reduced. This could be through reducing the amount of packaging they use, opting for products with less packaging or changing to compostable packaging.

## 8. Mathematics

- **Waste audit**

What can students do to help reduce the amount of waste they send to landfill? This activity asks students to collect data over a week about the types of waste disposed of in their house.

Using an Excel spreadsheet, ask students to collate the data and present it in a bar graph. They should look at the percentage of items that were placed in each bin, including the percentage of items placed in the wrong bin. They should also look at the percentage of items that are made from different materials).

Analyse the individual data sets as a class to see if there are any common trends. Then asks the students to come up with ways to address these issues. This could include developing a poster or redesigning their household bin system.



- **Waste collection route redesign**  
Using a street directory or online map website, select an area of the city. Look at the road network and ask students to calculate the shortest route for a waste collection truck to empty all of the bins in the area. Remember that the truck has to collect the bins from both sides of the street. Calculate the total distance travelled and the time it would take to collect all the bins.

- **Buy in bulk**  
One way to reduce the amount of waste we create is to buy items with less packaging. Ask students to select five items that their family buys regularly that could be bought in bulk quantities (for example, chips, flour, milk, rice, and nuts) and to compare the price difference per 100 grams. Is it cheaper to buy in bulk? And how much could you save in one year? Students can use the *save packaging – buy in bulk* activity sheet to record their data.

To extend the topic, you could ask students to produce an information brochure for their parent/carer about avoiding packaging when shopping. It could include looking for products with recyclable packaging or buying in bulk to reduce packaging.

For more information visit the *Wipe out waste* website.

[www.wow.sa.gov.au](http://www.wow.sa.gov.au)

- **Waste and recycling board game**  
Use recycled or reused material to create a 'waste and recycling' board game, such as bottle tops for counters and cereal box card for the board. Students should include directions such as "move back three spaces" for incorrect waste disposal, or "move forward 3 spaces" for using the correct bin.

## 9. English

- **Just ask Vin**  
As a class, watch the *Which Bin* videos in the *Meet Vin* section and discuss the features of each video and how the message is delivered.

Do students like them and do they think that they will be successful in changing people's waste disposal behaviour.

After the discussion, ask students to develop their own waste education video. If you do not have access to video equipment, you could ask students to develop a storyboard for their video.

- **Recycling symbols**  
Why are symbols important? As a class, discuss the importance of symbols and the role they play in communicating information. Use the recycling symbol (and/ or the [Australasian Recycling Label](#)) as an example. Are students familiar with these symbols and do they know what they mean. Ask students to look for the symbol on packaged products their family buys regularly. Can they find them?

To extend the lesson, ask students to develop a set of symbols for a packaged product that tells people how to correctly dispose of the packaging.

- **Waste and recycling word wall**  
As students progress through their waste management journey, ask them to create a waste and recycling dictionary using the *waste words* activity sheet. As new words arise that they are unfamiliar with, they can be added to the sheet.
- **Waste warrior comic strip**  
Ask students to choose their favourite waste monster (or create their own) and to develop a short comic strip using the *waste warrior comic strip* activity sheet. Each comic strip should show their chosen character solving a waste related issue and include some key waste management tips.

- **Meet the family**  
Students to view the family of waste eating monster trucks and discover who they are and what each collects. Students to choose from 'Chomp' (the general waste truck), 'Tasty' (the organics truck) or 'Crunch' (the recycling truck) and write a 'character profile'. The character

profiles should include their name, physical appearance, personality/traits, likes/dislikes, fast facts and a picture.

- **My waste monster**

Ask students to complete the *My waste monster story* activity sheet to create a narrative about the waste monster trucks. Before getting started, the class should review the essential elements of a good narrative (orientation, complication, a series of events and a conclusion).

- **Larry litter**

As a class watch and listen to, the *interactive 'Larry Litter'* story book. After reading the book, discuss Larry's journey and brainstorm a list of environmental impacts that littering and putting rubbish into incorrect bins can have in their local area, state, our country and even the world.

[kesab.asn.au/litterless/interactives/](http://kesab.asn.au/litterless/interactives/)

## 10. The Arts

- **Recycling collage**

Students to create a class waste and recycling mural, collage or sculpture using only reused and/or recyclable materials.

- **Design your own bin poster**

Students research the bin system in the local Council area and identify the different lid colours. They then use the colours of the different bin lids to create a poster for the school or home to educate others about what belongs in each bin.

- **Design your own waste monster**

Ask students use their imagination and create their very own waste monster. What are they called? What do they would look like? How do they sound? and what would they say? To challenge students, instead of just drawing their creation, you could ask them to construct a 3D version out of recycled materials.

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- **Junk craft**

Using classroom resources and recycled materials and objects, encourage students to use their imaginations and create their very own junk craft masterpiece.

Kesab's Junk Craft website provides instructions for six junk craft activities.

[kesab.asn.au](http://kesab.asn.au)

## 11. Languages

- **Educating others**

What are the top 5 languages spoken in your school (or Council area) other than English? Select one of the languages and design a simple 'reduce, reuse, recycle' poster using that language. Alternately, students could produce a 'reduce, reuse, recycle' poster that uses pictures or symbols only (no language).





[cttg.sa.gov.au/waste](http://cttg.sa.gov.au/waste)