



## Waste audit tool

A practical guide for Victorian schools



**ResourceSmart  
Schools**

ResourceSmart Schools waste audit tool  
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## About this audit

Welcome to the ResourceSmart Schools (RSS) waste audit tool.

The audit tool helps you identify the types of waste generated at your school, where the waste comes from, and how much waste gets recycled, composted or sent to landfill. You will assess your waste management systems (bins, signage, composting and worm farms) and waste collection contracts. Completing a waste audit and a litter audit are compulsory actions of the [RSS waste module](#).

You can then analyse your data to find ways to improve waste management and resource recovery, recording your ideas and next steps in your waste action plan.

ResourceSmart Schools audit their waste every year and upload results, photos and presentations to the RSS online system as part of the waste module. The first audit provides baseline data and subsequent audits monitor progress against baseline data.

The waste module is one of 5 modules in the RSS program. The other modules are core, biodiversity, energy and water. Schools must accomplish a set number of actions to complete each module and receive a certificate valid for four years.

The waste module has two separate audits – one for litter and one for waste:



### What's included in this tool?

- › The difference between waste and litter
- › Tips for completing the audit
- › Checklists to guide teachers/facilitators through the audit
- › Six worksheets
- › Waste and recycling category labels, extra resources and linking audit activities to the Victorian Curriculum (see the appendix)
- › Glossary of waste terms

### What does the audit involve?

Teachers and students work together to assess waste and recycling at their school. Teachers will do some preparation and follow-up work (see audit checklists) and students will complete worksheets on audit day.

### Who should do the audit?

The worksheets are best suited to students in Years 3 to 10, with the supervision and guidance of a teacher.

### How long does the audit take?

Teachers will use their discretion to determine a realistic timeframe for each step of the waste audit.

### How does the audit link to the Victorian Curriculum?

Exploring the concept of waste, which includes a waste audit, contributes to several learning areas in the Victorian Curriculum (see Appendix 3: Curriculum links). Involving students in this audit also helps with:

- › **Critical and creative thinking:** Responding effectively to environmental, social and economic challenges requires young people to be creative, innovative, enterprising and adaptable, with the motivation, confidence and skills to use critical and creative thinking purposefully.
- › **Mathematics:** Conducting a waste audit can incorporate using units of measurement, data and interpretation, chance, patterns, fractions, decimals and numbers.

Download curriculum guides from [sustainability.vic.gov.au/School/Modules/Curriculum](https://sustainability.vic.gov.au/School/Modules/Curriculum)

### Where can I find more information?

Visit [sustainability.vic.gov.au/School/Modules/Waste-module](https://sustainability.vic.gov.au/School/Modules/Waste-module) for a module checklist and 'how to' guide packed full of ideas on how to work with students and the school community to reduce waste and increase resource recovery.

## What's the difference between waste and litter?

Waste is used very broadly to describe items or materials that have been discarded because they are no longer wanted or no longer fit for purpose or cannot be used again for their original purpose (food packaging for example). Much of what is generally considered to be waste can be reused, repurposed or recovered for recycling.

Litter is waste that is outside the waste management system. In schools, this may be waste that has been dropped, illegally dumped, blown by the wind from bins without lids or blown in from outside the school.

Common waste materials in schools include food, paper and packaging, glass, plastic and aluminium. Sending waste to landfill without recovering materials that can be recycled, reused or composted is not sustainable. As these materials rot under mountains of other rubbish they release greenhouse gases that contribute to climate change.

In just one year (2019), ResourceSmart Schools collectively avoided 31,500 cubic metres of waste. That's the equivalent of 126 Olympic-sized swimming pools filled with waste! They did this by minimising waste going to landfill and improving resource recovery and recycling.





## **Tips for a successful audit**

### **Pick a suitable date**

Doing your waste audit the day before bins are collected will give you the best sample of your school's waste. Try to avoid Term 4 classroom clean-ups or events such as fetes or camps. Mornings are better due to heat and odour.

### **Select location of sample bins**

Ideally, you want to audit every bin in the school, but if that's not possible, audit at least 6 landfill bins and 6 recycling bins. Collect bins from various locations such as offices, schoolyard, specialist classrooms and computer labs. This will give you an understanding of what areas are most likely to be contaminated, the type of disposed waste and which classes produce more waste.

### **Select a room to audit the sample bins**

Book a suitable indoor or sheltered outdoor space to conduct the audit. Consider ventilation in indoor spaces and wind tunnels in outdoor spaces.

### **Notify school staff**

Talk to cleaning staff about your planned audit so they understand what you are doing and can work around you. You will collect the bins before the audit and store them in a secure location, so you need to make sure that cleaning staff won't empty them.

### **Use the audit checklist**

The teacher/facilitator checklist takes you step-by-step through the audit and will help you get everything ready in advance.

# Teacher/facilitator audit checklist



## Before audit day

### Step 1: Gather background waste management information

Upload 12 months of waste bills in the RSS online system to set your baseline data.

Complete the Gather background information with school staff worksheet by talking with your school principal, business manager, students and other staff members to get insights into parts of your waste stream you don't usually see.

Print an aerial map of your school. If your school doesn't have an aerial map, you can use Google Maps.

Walk around your school with a map or aerial image of your school and mark the location and type of bins. Use this map to plan where students will audit bins.

Create category labels or use the waste and recycling category labels in Appendix 1.

The night before or the morning of the audit, collect your chosen bins and label them clearly so you can return them after the audit. Audit at least 6 landfill bins and 6 recycling bins, but ideally more if you can. Store bins in a secure location and notify school cleaners.

Print student worksheets.

### Step 2: Organise equipment

Each pair/small group will need:

Aerial map of school grounds and/or floor plans of your school

Student worksheets

Pens and clipboards

Camera to gather evidence for your RSS waste module, presentations and audit assessment

1 or 2 large tarpaulins

Gloves for each student

Tongs – 1 per pair of students

Waste category labels (use words and pictures)

1 brush and shovel

1 rake or outdoor broom

6 buckets or tubs

2 large rubbish bags

1 scale for weighing waste and recycling

## On audit day

### Step 3: Introduce waste audit tool

Explain why you are auditing the school's waste and check that students understand all the terms used.

Review the method with the students (see Step 4).

Conduct safety briefing. When auditing waste, students must wear gloves and closed-toe shoes at all times. If they find sharp or heavy items, they must not touch them and should tell their teacher.

Organise student pairs or small teams and give them equipment and worksheets.

Ensure all students understand their responsibilities, timeframe, equipment use and tasks.

### Step 4: Collect data

Collect data on where bins, skips and paper reuse trays are located at school and answer questions in the I love separating my waste worksheet.

Photograph signage on bins.

Walk around your school and investigate current strategies to reduce the amount of waste sent to landfill using the Current waste practices at our school worksheet.

Audit your bins and record information in the three worksheets: What's in our landfill bins? What's in our commingled recycling bins? and What's in our paper and cardboard recycling bins.

## How to audit your waste and recycling

- A Spread out tarpaulin and place waste labels directly on the tarp or on buckets.
- B Empty landfill bin contents onto tarpaulin and take a photo.
- C Use tongs and gloved hands to separate waste into piles (paper, cardboard, food, steel cans, recyclable plastic, aluminium cans and soft plastics) and photograph each pile.
- D Count number of items in each pile. For small pieces of paper, estimate the number of A4 pages worth of small pieces.
- E Weigh each pile. Weigh the empty tub and then weigh each pile in the tub. Remember to subtract the weight of the empty tub from the weight of the full tub.
- F Record weight in the landfill bin worksheet (What's in our landfill bins?).
- G Repeat steps B to F for the recycling bins and paper and cardboard bins.
- H Clean up audit site and place all waste into correct bins.
- I Create pie charts for landfill, recycling and paper/cardboard audit results.

## During or just after audit day

### Step 5: Complete waste action plan and prioritise actions

Start brainstorming your waste action plan with students. Ask the following discussion questions:

- › Were you surprised by the results?
- › What was the biggest waste pile and which items were most common in each pile?
- › How did the waste get to our school (canteen, lunchboxes)?
- › What can we do to have less of the most common items in the waste?
- › Can we change anything at school to reduce our waste?

- › Can we improve our bin signage to make them clearer and easy to understand?
- › What recommendations or actions should be included in our waste action plan?

Populate the waste action plan with findings and recommendations. List actions in priority order from highest to lowest.

Upload waste audit results, photos and presentations to the waste module in the RSS online system as support and evidence.

## After the audit

### Step 6: Communicate and implement

Encourage students to present findings and recommendations to the principal, assistant principal and school council (buildings and grounds subcommittee).

Communicate to the wider community through:

- › presentations during whole school assembly
- › stories and hints in the school newsletter, school blog and any social media channels
- › stall at school fair
- › Student conferences
- › teacher and principal conferences.

Upload presentations to RSS online system as support and evidence.

Get the waste action plan approved by the principal, assistant principal and business manager.

Upload the approved waste action plan to the waste module in the RSS online system and incorporate it into your School Environmental Management Plan (SEMP).

### Step 7: Monitoring for continued engagement

Ongoing monitoring will tell you how effective you have been in implementing changes and reducing waste and increasing resource recovery.

Recruit monitors to look regularly for litter hotspots.

Conduct regular waste audits to monitor progress.

Update bills and waste reporting in the RSS online system to monitor seasonal trends and compare your waste reduction over time and with other Victorian schools.

Write stories about your waste activities to share in newsletters or on your school's intranet, website and social media channels.

Regularly review the volume of waste in bins before they are collected and take photos of the top layer of targeted bins to estimate the contents of each bin and monitor change over time. By measuring how full the bins are on collection day over two or three months, you can track your waste stream and identify if this corresponds to bin sizes of 4 m<sup>3</sup> or 8 m<sup>3</sup>. This will tell you if your school could reduce the number of bins, the collection frequency or the size of the bins to save money on your waste management contract.

Compare impact and achievements with your baseline (reflect on where you started).

Communicate and celebrate your success with your school community!

## Gather background information with school staff

### To be completed before audit day

Interview your school principal and business manager to gather background information. This information will be useful when drafting your waste action plan.

### Questions

How often are the school bins collected?

Could the bins be collected less often?

Are the bins the right size for your school needs?

Could smaller bins or skips be a better option?

How does your school manage chemical waste, sanitary waste, organic waste?



Do you have the right bins for the waste you generate? For example, are recyclable materials going to landfill because you don't have the right recycling bins?

Can your waste provider deliver other services, such as audits, bins, signage and professional development for staff?

Are there other waste contractors who can provide the same service or better at a lower cost?

What materials can be collected by your waste collection service for recycling?

## I love separating my waste

Name (s): \_\_\_\_\_ Date: \_\_\_\_\_

Find out where your bins are located and record your data in the table below.

### Number of bins in each area

	Landfill/ rubbish bins	Paper and cardboard bins	Commingled recycling bins	Compost collection buckets	Paper reuse trays	Other
Staffroom						
Principal's office						
Assistant principal's office(s)						
Main office						
Administration area						
Classrooms						
Schoolyard						
Canteen						
Sick bay						
Art room						
Sports hall						
Multipurpose room/hall						
Library						
Other locations						
TOTAL						



### Rooms without bins or signage

Did you find any rooms without bins or signage? List them in the table below.

Location	Type of bins required	Signage needed to tell people what to put in each bin

### Photocopiers and printing

Ask your administration or IT staff if photocopiers and printers are set to automatically print on both sides of the paper.

Printer / photocopier location	Set to double-sided printing by default (Yes/No)	Comments

## Current waste practices at our school

Name (s): \_\_\_\_\_ Date: \_\_\_\_\_

Walk around your school and talk to the business manager, sustainability coordinator and/or principal about your school's current practices. Tick the boxes for each action your school is already doing and **take photos as evidence**.

### How does your school process food and garden organic waste?

Which of the following do you have at your school?

- |   |             |
|---|-------------|
| Local council pick-up service for garden organics waste | Bokashi     |
| Food organics and garden organics (FOGO) service        | Worm farms  |
| Compost bins, bays or tumblers                          | Mulching it |
| Green cone  | Chooks      |
| Other (please list):                                    |             |

### How does your school reduce waste going to landfill?

Which of the following do you do at your school?

Our waste monitors check all classroom bins before they get emptied.

Students are encouraged to use reusable water bottles and lunchbox containers.

Our canteen uses reusable containers / minimal packaging / biodegradable products.

We share information and update our school community on waste issues during assemblies, in our newsletters and on the school website.

We have Nude Food Days on (select the days that apply):

Monday     Tuesday     Wednesday     Thursday     Friday

Students take their rubbish home

### Recycling

Are you keen recyclers? Which of the following do you collect for recycling at your school?

- |  |                      |
|--|----------------------|
| Soft plastic                           | Polystyrene          |
| Dental items such as toothbrushes      | E-waste              |
| Batteries                              | Clothing             |
| Ink and toner cartridges from printers | Fluorescent tubes    |
| Mobile phones                          | Other (please list): |



## What's in our landfill bins?

Name (s): \_\_\_\_\_ Date: \_\_\_\_\_

Record your landfill audit results below.

### Landfill bin audit results

Category	Tally or weight	Comments
General waste		
 Paper and cardboard		
 Organics (food and garden waste)		
 Soft plastics		
 Commingled recycling (glass, steel, aluminium, plastic) *		
Other (please list)		
TOTAL WEIGHT		

### Key

-  Yellow Can be recycled through your school's recycling service.  
\* Important task: check what you can put in your recycling collection service before the audit.
-  Green Can be composted at your school or included in your local food organics and garden organics collection (if available in your area).
-  Red Soft plastics can be collected and dropped off at participating soft plastic recycling collection points, including some supermarkets. Visit [redcycle.net.au](http://redcycle.net.au)

## What's in our commingled recycling bins?

Name (s): \_\_\_\_\_ Date: \_\_\_\_\_

Record your commingled bin audit results below.

Before you start: check what items can be included in your recycling bins. You may need to amend the table below.

Can you work out the percentage of contaminants in your recycling bin?

### How to calculate contamination

Total number of items or weight of contaminated waste ÷ total number of items or weight × 100 = contamination rate (percentage of contamination in the recycling bin)

### Recycling bin audit results

Category	Tally or weight	Comments
General waste		
Paper and cardboard		
Organics		
Soft plastics		
Commingled recycling – aluminium, steel, plastics, glass		
Other (please list)		
TOTAL WEIGHT		



## What's in our paper and cardboard recycling bins?

Name (s): \_\_\_\_\_ Date: \_\_\_\_\_

Record your paper and cardboard recycling bin audit results below.

Can you work out the percentage of contamination in your recycling?

### How to calculate contamination

Total number of items or weight of contaminated waste ÷ total number of items or weight × 100 = contamination rate (percentage of contamination in the paper bin)

### Paper and cardboard bin audit results

Category	Tally or weight	Comments
General waste		
Paper and cardboard		
Organics		
Soft plastics		
Commingled recycling – aluminium, steel, plastics, glass		
Other (please list)		
TOTALS		

## Appendix 1: Waste and recycling category labels

Use these labels to label bins and audit your waste.

**GENERAL  
WASTE**

**PAPER AND  
CARDBOARD**

**ORGANICS**

**SOFT  
PLASTICS**

**COMINGLED**

**OTHER**

## Appendix 2: Resources

- › Planet Ark's [Recycling Near You](#) has resources such as posters and information on correct recycling.
- › [Sustainability Victoria](#) has information on disposing of waste and recycling properly.
- › The ABC's [War on Waste](#) is a documentary series on the impact and solutions to material waste in Australia.
- › Download a waste module checklist and 'how to' guide from [Sustainability Victoria](#).



## Appendix 3: Curriculum links

Exploring the concept of waste, which includes a waste audit, contributes to several different learning areas in the Victorian Curriculum F–10. The table below lists examples of how a waste audit could contribute to student learning outcomes in Years 3 to 10.

For more inspiration, read about sustainability as a cross-curriculum priority on the Victorian Curriculum website or download the [RSS curriculum guides](#).

### Linking waste audits with the Victorian Curriculum

Levels	Learning area	Content description
Years 3 and 4	Science	Science knowledge helps people to understand the effects of their actions (VCSSU056)
Years 3 and 4	Health and physical education	Describe strategies to make the classroom and playground healthy, safe and active spaces (VCHPEP095)
Years 3 and 4	Ethical capability	Explore the extent to which particular acts might be regarded by different people as good or bad, right or wrong, better or worse, and explain why (VCECU005)
Years 5 and 6	Science	Scientific understandings, discoveries and inventions are used to inform personal and community decisions and to solve problems that directly affect people's lives (VCSSU073)
Years 5 and 6	Ethical capability	Discuss how ethical principles can be used as the basis for action, considering the influence of cultural norms, religion, world views and philosophical thought on these principles. (VCECU010)
Years 7 and 8	Science	Some of Earth's resources are renewable, but others are non-renewable (VCSSU100)  Science and technology contribute to finding solutions to a range of contemporary issues; these solutions may impact on other areas of society and involve ethical considerations (VCSSU090)
Years 7 and 8	Geography	The challenges of managing and planning Australia's urban future (VCGGK126)
Years 7 and 8	Health and physical education	Plan and use health strategies and resources to enhance the health, safety and wellbeing of their communities (VCHPEP130)
Year 9 and 10	Geography	Environmental worldviews of people and their implications for environmental management (VCGGK146)
Year 9 and 10	Health and physical education	Plan, implement and critique strategies to enhance the health, safety and wellbeing of their communities (VCHPEP149)

## Glossary

**Composting** is a process where microorganisms breakdown organic materials (in the presence of oxygen), which produce carbon dioxide, heat and organic residues that may be used as a soil additive.

**Food organics** includes food waste from households or industry including food processing waste, out-of-date or off food, meat, fruit and vegetable scraps. It excludes liquid wastes.

**Garden organics** are derived from domestic, industrial and commercial garden sources including grass clippings, woody garden organics, trees and limbs, stumps and roots. Also referred to as green waste or green organics.

**Kerbside collections** are the waste collection services provided by local councils to residential properties including rubbish, commingled recyclables and garden organics. It excludes hard waste.

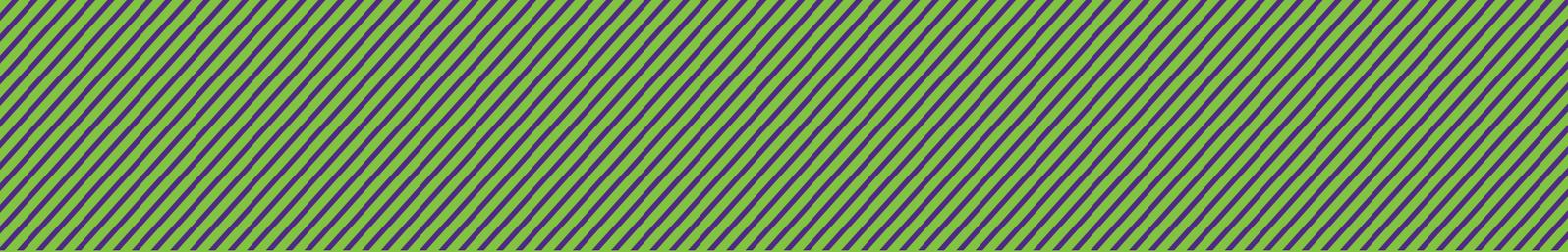
**Landfill** is a site for the disposal of waste to land.

**Litter** includes rubbish and waste left in public or open spaces.

**Mulch** is any garden organics product that has undergone composting for a period of not less than 6 weeks, which is then suitable for placing on soil surfaces.

**Recycling** is a term that covers a wide range of activities including collection, sorting, reprocessing and manufacture into new products.

**Waste** is anything that is no longer valued by its owner and which is, or will be, discarded.



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