



Dedicated to a better Brisbane

Red. Yellow. Green: Unpack household waste

Year level

Primary with extension activities listed at end of lesson plan.

Lesson description

Students will understand the role of Council kerbside collection services.

In this lesson students will learn about Brisbane City Council's three waste streams and explore the differing waste management practices.

Curriculum links

Year 4

V 9. The roles of local government and how members of the community use and contribute to local services (*HASS – AC9HS4K08*)

Years 5 and 6

V 9. Explain how characteristics and properties of materials, systems, components, tools and equipment affect their use when producing designed solutions (*Design and Technologies – AC9TDE6K05*)

V 9. Propose actions or responses to issues or challenges and use criteria to assess the possible effects (*HASS - AC9HS5S06*)

Materials

- Paper
- Writing utensils
- Ability to watch a video (linked)

Procedure



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Where does the general waste go?



Where does the recycling go?



Video link: [Where does your green waste go?](#)



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Have the students examine the diagrams and video of the three waste streams in Brisbane.

1. Facilitate a group discussion using the following questions:

What can you understand about the journey of the three waste streams by looking at the information above?

Do all the streams go to the same place in the end?

Why is it important to separate different waste into the three kerbside waste bins?

What impact does contamination have on each waste stream?

General Waste – Red Bin

When the waste contents of your general waste/ red lid bin are collected and tipped into a garbage truck, it is transported to a RRC – Resource Recovery Centre. There, it is tipped into a waste pit and crushed by a bulldozer to compact the waste down. This compacted waste is packed into a waste transfer truck and taken to landfill. At the landfill site, the transfer truck tips the waste into a large (50m deep) cell or pit to be buried. There is a bulldozer at the landfill that will compact the waste down further. At the end of the day the waste is covered by a layer of soil. When the cell is full it will be capped with clay and soil and revegetated on top.

Landfills are problematic as decomposing waste in the ground releases methane which is a potent greenhouse gas that contributes to climate change. Another landfill problem is leachate which is water that becomes polluted as it filters through waste in landfill. Brisbane City Council mitigates these issues by burning off our landfill's methane in order to turn it into energy. Leachate is also collected and cleaned before it goes back into the environment.

Recyclable Waste – Yellow Bin

The truck that collects the contents of your recycling/ yellow lid bin takes your recyclables (firm plastics, paper, cardboard, glass and metal packaging) to our Recycling Contractor- Visy's MRF (Material Recovery Facility). At Visy the recyclable materials are tipped onto a conveyor belt and staff do their best to remove contamination (items that do not belong in the recycle bin). Machines then begin to sort and separate into the different recyclable streams. Each material is baled into large units that are transferred to different resource recovery facilities to be recycled into new products or packaging. Paper and cardboard are remanufactured on site, at the Brisbane Visy facility.

For more information check out some video resources:

- [Visy Recycling Education Video](#)
- [Visy Recycling Video](#)



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Garden Waste – Green Bin

Every fortnight Garden Organic / Green bin will be collected by a truck. This truck takes green waste to one of the four RRC Resource Recovery Centres for further processing. Garden waste is then transferred by trucks to industrial scale composting facilities. At these facilities, the green waste is mulched and processed into a range of products, like landscape soils, potting mix, compost etc and can be used by nurseries, commercial agriculture, and horticulture outlets.

Additional information

Brisbane City Council provides each household with a kerbside collection bin. Council can repair or replace bins that become damaged. Council employs companies to collect, transport and process our waste.

Each household or business pays Brisbane City Council rates which includes a Waste Utility Charge which covers all waste costs including waste levies changed by the Queensland Government. The Queensland Government charges Council based on the amount of waste disposed to landfill.

Brisbane Landfill is more than 30 years old. It is nearing capacity. What should Council do when our landfill is full? Have the students come up with solutions in small groups.

Extension activity

- Book an excursion to the [Towards Zero Waste Education Centre](#) at Brisbane Landfill to receive a waste education presentation with Brisbane City Council and tour of the landfill. This will give students the opportunity to learn more about moving towards zero waste, waste minimisation and landfill operations.
- Does your school have recycling bins or green waste bins? If not, create a campaign in support of recycling and green waste bins to inform the school principal or school business manager.
- Have the students investigate additional actions that the community can take to reuse and recycle items and minimise what is sent to landfill. For example, batteries can be recycled through the b-cycle stewardship and placed in designated collection bins at participating organisations. Further ideas include (but not limited to): e-waste, textiles, stationery and mobile phones.
- Investigate product stewardships. Product stewardship is an approach where the responsibility of waste becomes a shared approach between manufacturers, importers and governments.