

Sustainability Cycle

Edith Cowan University, Western Australia

Course: Bachelor of Education (Secondary)

Food and Materials Technologies:
Home Economics

Charlotte Brown



ECU is committed to reconciliation and recognises the traditional custodians of the land upon which its campuses stand and their connection to this land. We acknowledge and offer our respect to Aboriginal and Torres Strait Islander Elders and Aboriginal and Torres Strait Islander people past, present and emerging.

The Sustainability cycle



1. **Food waste:** from home, school or commercial kitchen.
2. **Decomposers or animal aided compost:** To turn food waste into usable compost introduce animals/organisms or bacteria. Options are chickens, a compost bin/pile or a worm farm. Either can be used in the cycle but consider the space required.
3. **By product:** Depending on the decomposer, this could be chicken manure, compost or worm leachate.
4. **Vegetable garden:** The by-product is then used as a fertiliser for a vegetable garden
5. **Fresh produce:** The vegetables and fruit produced by the garden are then used in cooking.

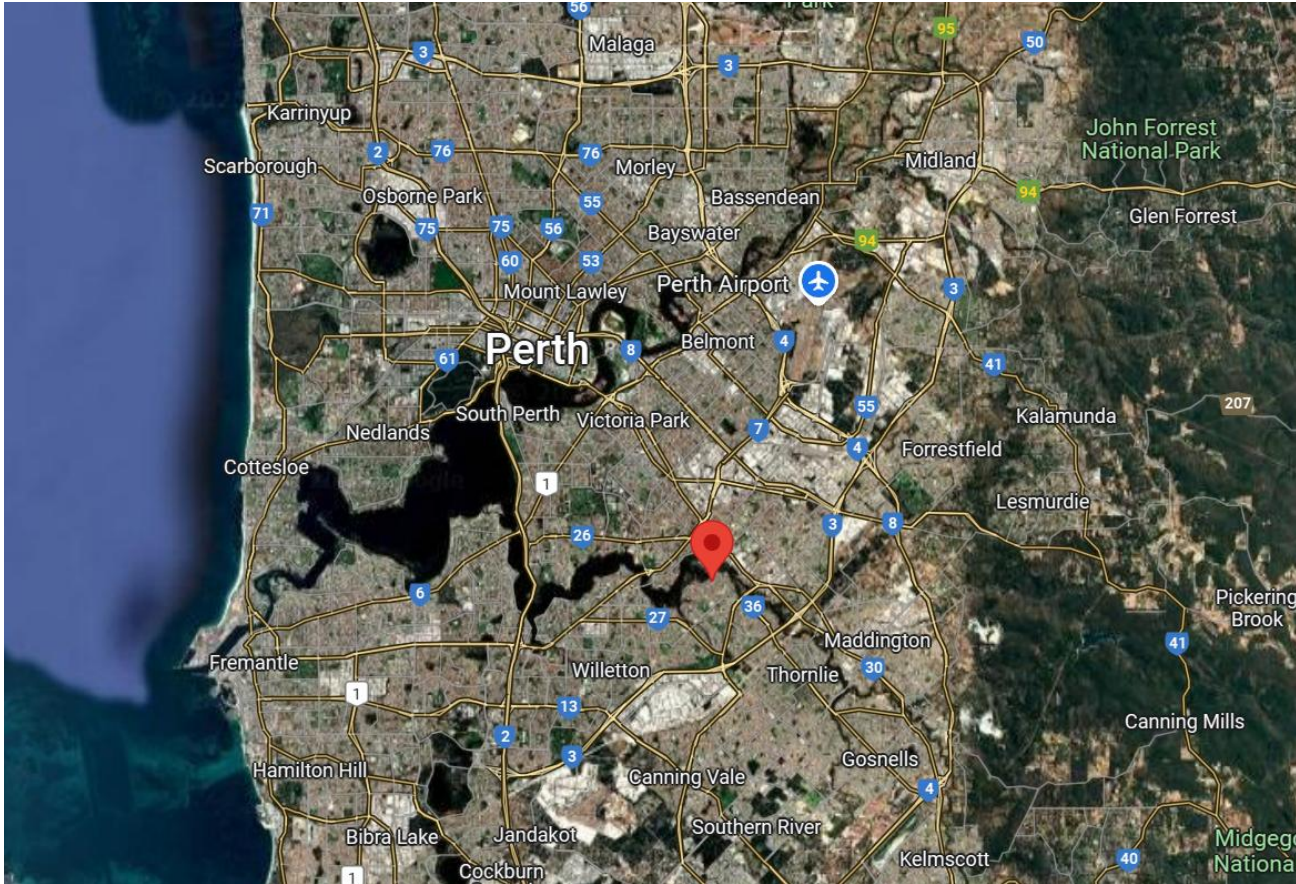
Why a Cycle?

The cycle has been created as an easy-to-understand guide/starting point to becoming more sustainable.

- School students produce 3 kg of food waste each per year
- households produce 2.5 million tons of food waste per year
- The cycle was produced to implement into schools to teach students how to be more sustainable and responsible for their food waste
- When the whole cycle is implemented, students can deliver the food waste to the chickens/worms or mix it into compost. This is so students can learn how and what is involved in becoming more sustainable.

This cycle has been developed to help combat food waste in homes, schools and communities.

In a Home



Implementation of sustainability cycle in a home setting.

Food Preparation:

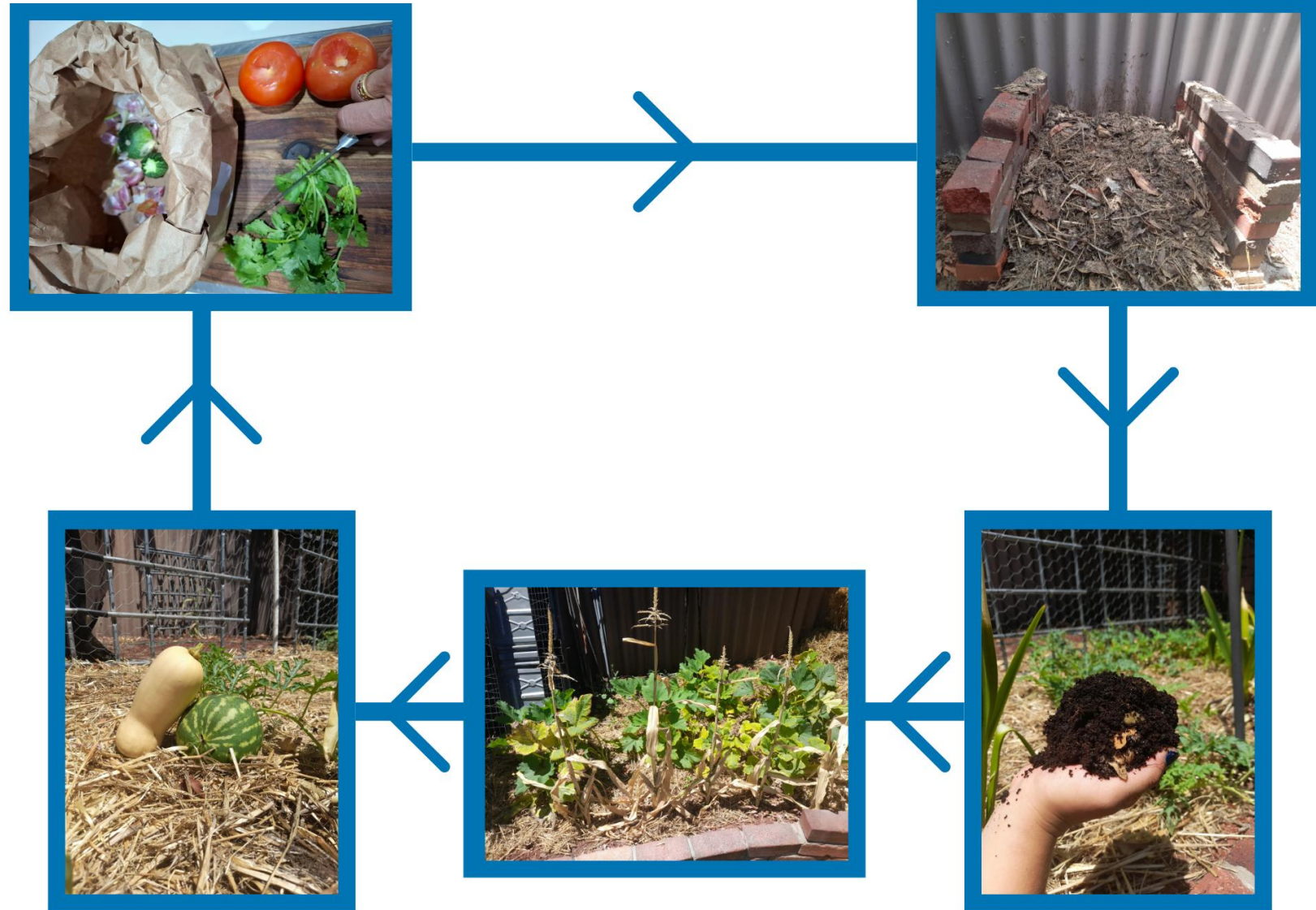
Waste/ compost bucket, with lid can be kept in the kitchen.

The waste/ compost can be deposited outside into a small worm farm or compost bin.

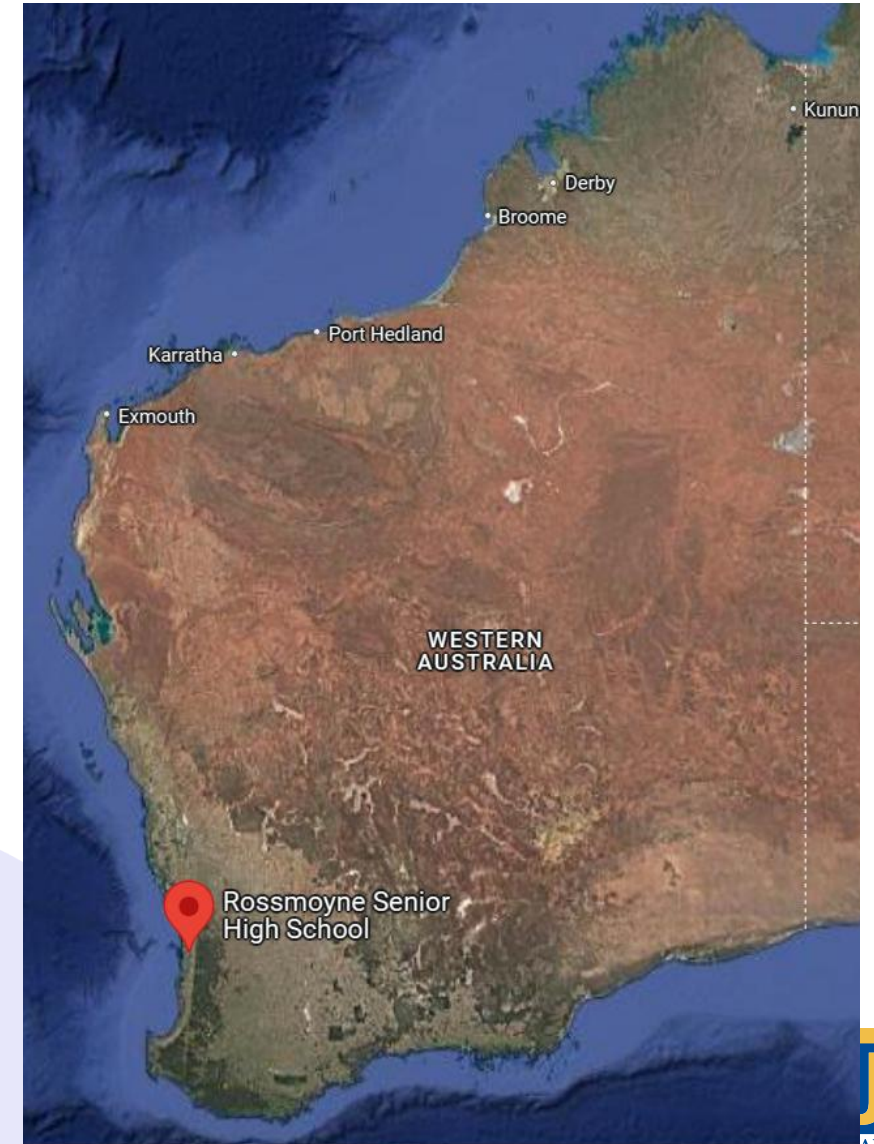
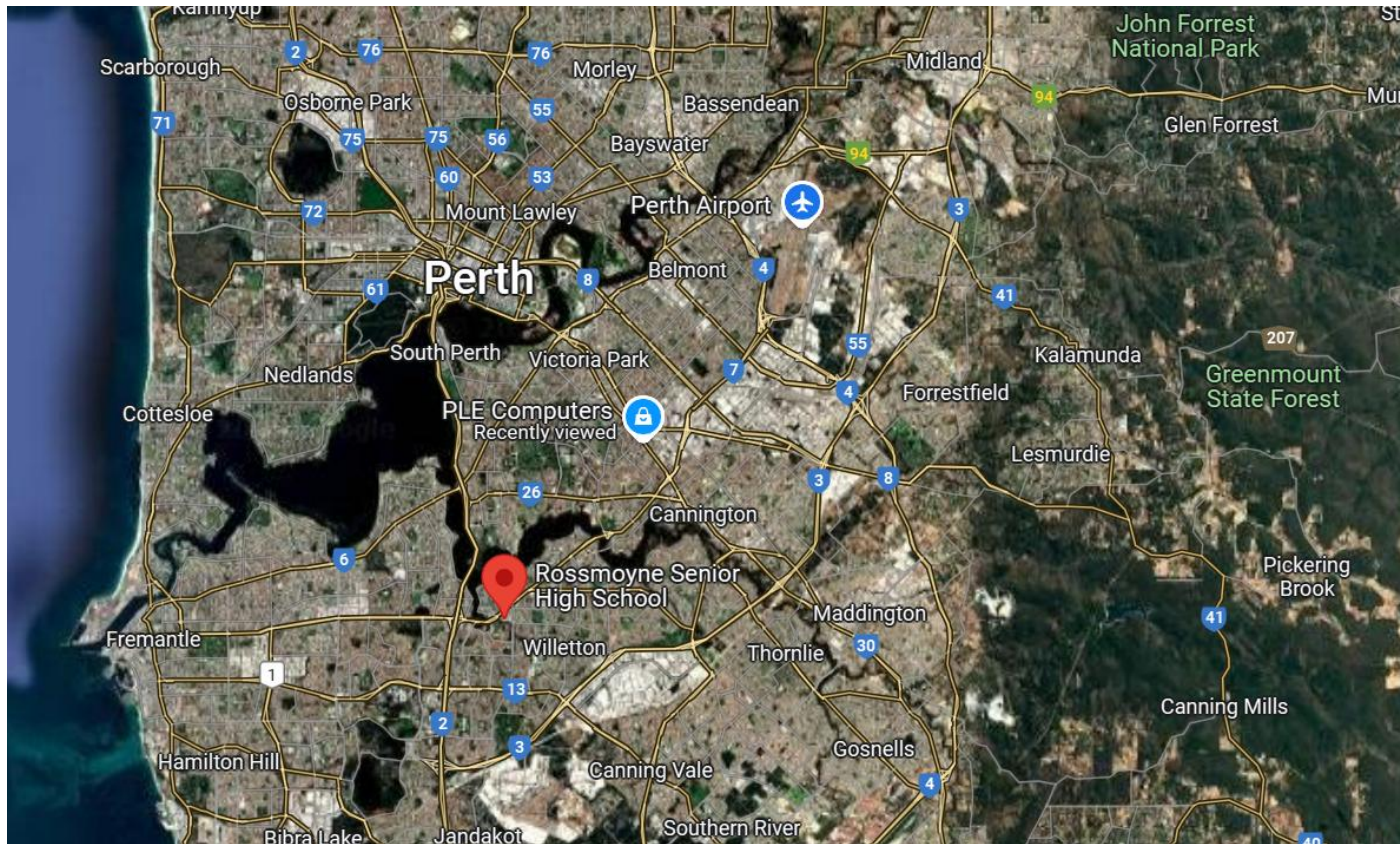
Linked to use for a vegetable garden.

Household strategies:

- Meal planning
- Reduce food waste
- Leftovers used for lunches
- Freezing of leftovers
- Check catering numbers
- Reduce over catering



In a Metropolitan School



Rossmoyne Senior High School



Keith Road
Rossmoyne
WA 6148



Implementation of Sustainability Cycle in a Metropolitan School

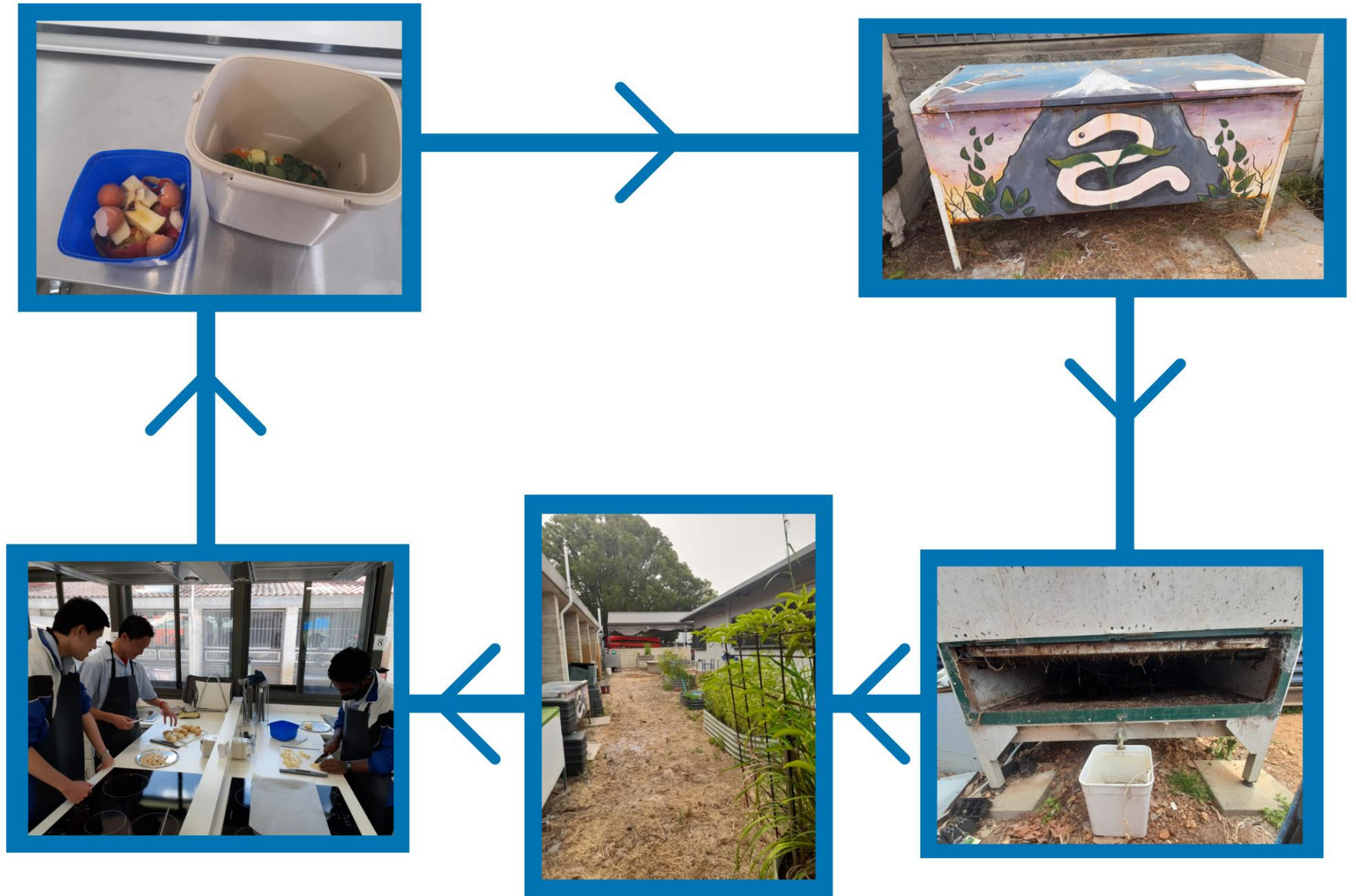
Some schools have aspects of the sustainability cycle.

Rossmoyne SHS has:

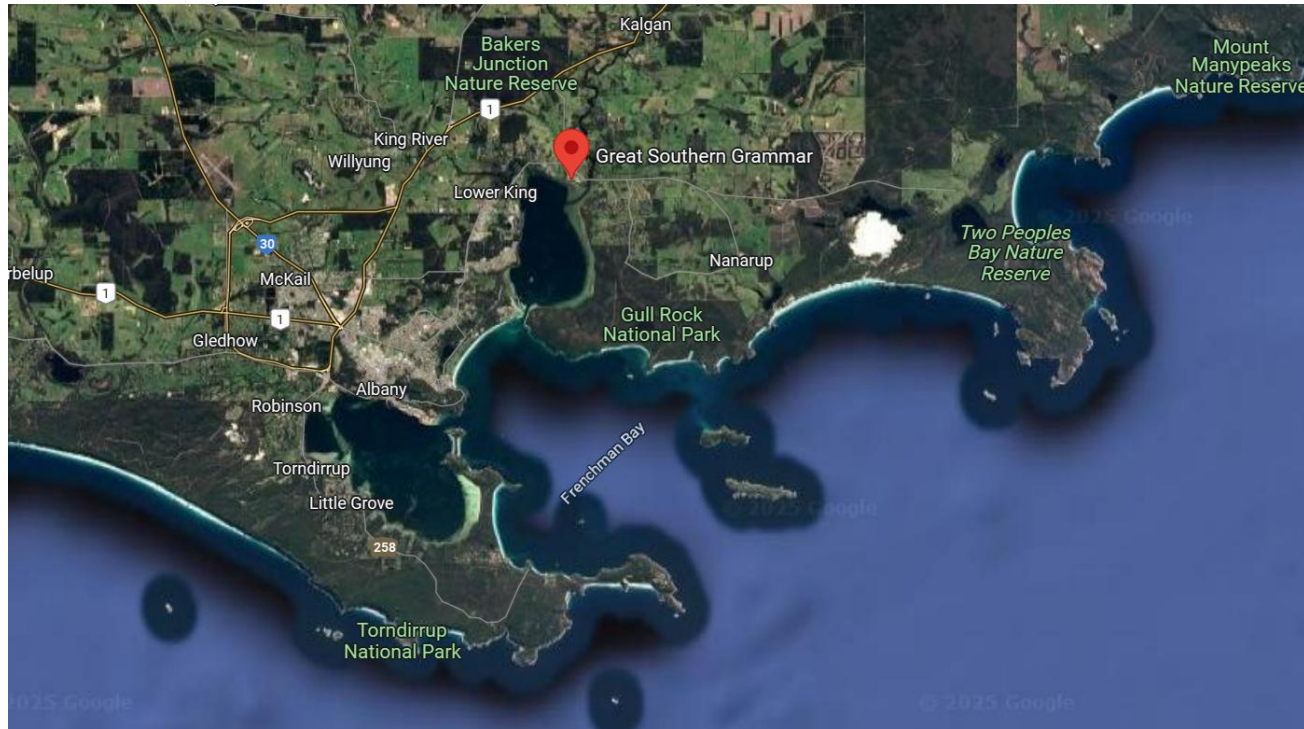
- Small vegetable garden
- Two large worm farms

Food/ cooking rooms have scrap buckets that are filled and dispersed between the worm farms.

Use similar process as outlined for a home setting.



In a Regional School



Great Southern Grammar



244 Nanarup Road
Kalgan
WA 6330

Implementation of Sustainability Cycle in a Regional School

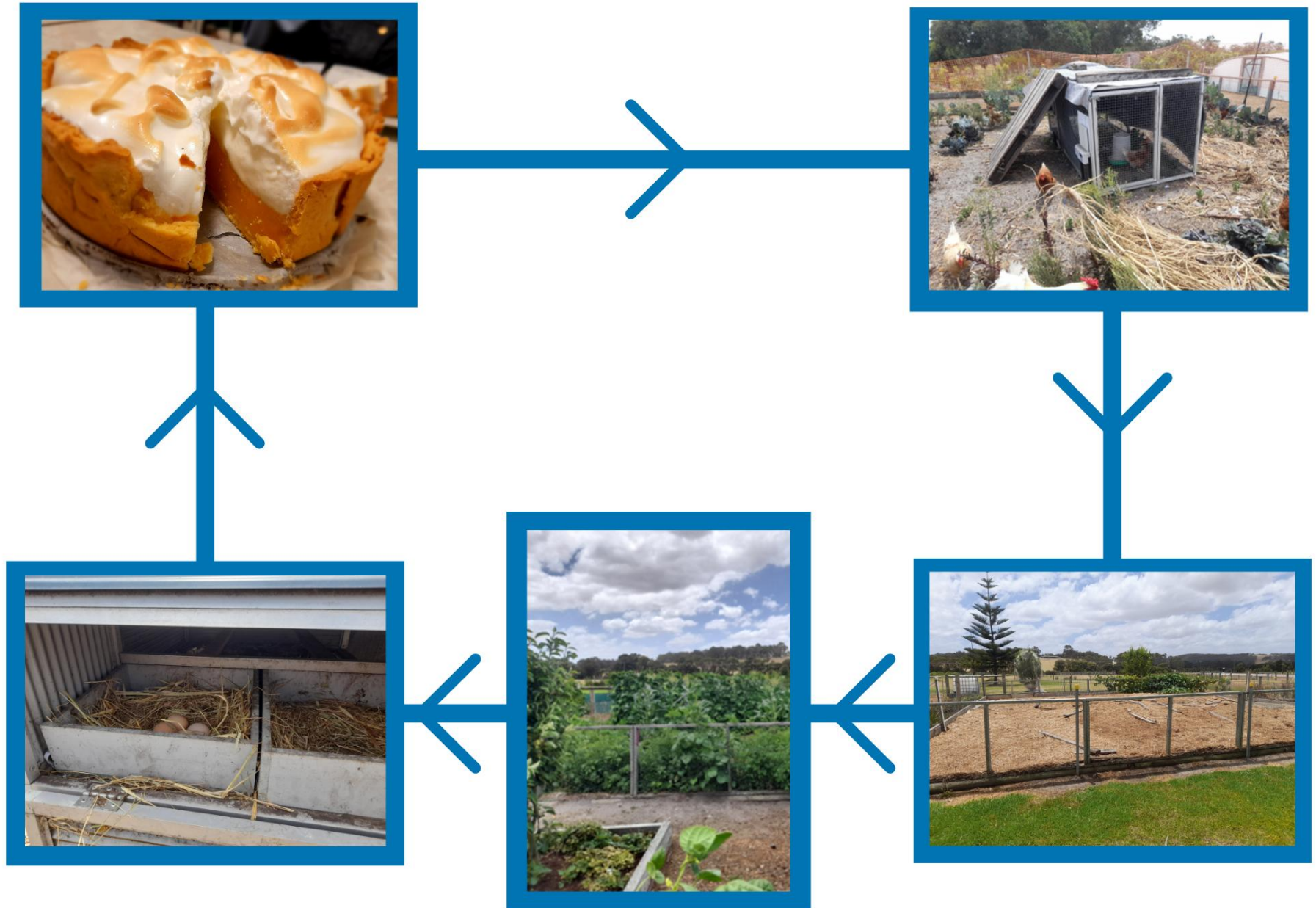
Sustainability in Great Southern Grammar:
- Course in sustainability
- Students work in garden

Supported by Food Technology classes,
College gardeners and teachers.

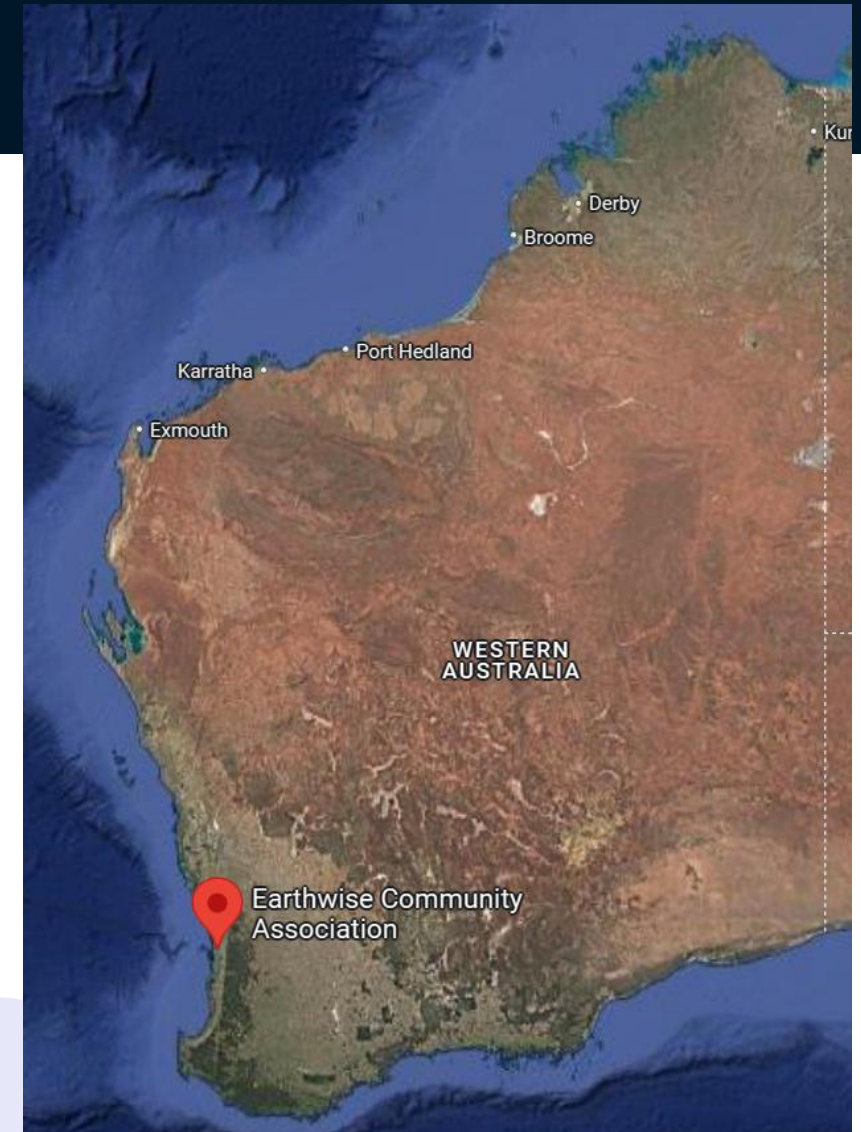
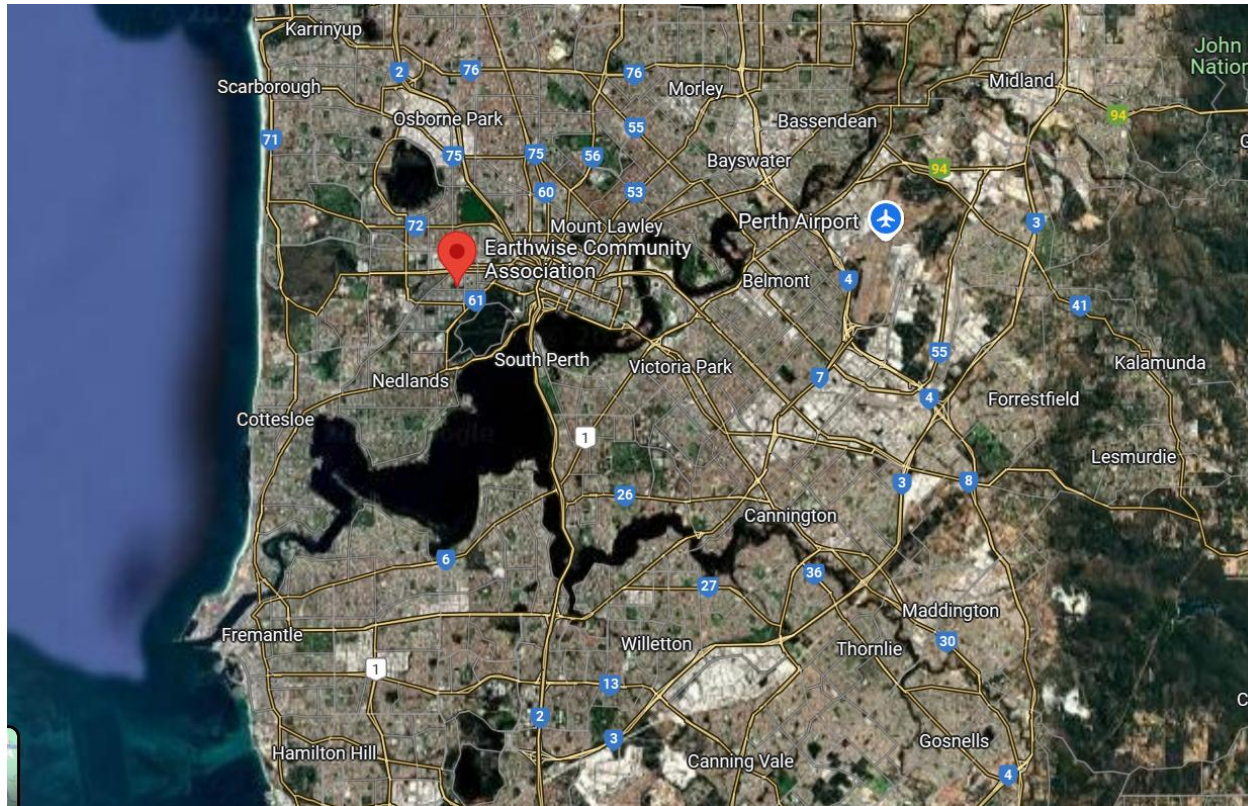
School has five large garden beds
- Rotation for growing crops
- Fruit and vegetables
- Foraged by chickens
and one bed left to fallow

Maximises productivity.

Teachers in Food and Technologies
classes adapt lessons to enable
use of products
Eg - strawberry balsamic vinegar.



In the Community



In the community



<https://perthisok.com/best-of-wa/the-best-community-gardens-in-perth/>

Community garden:

- zero waste approach to gardening.
- different gardens in different communities, allowing for climate of region
- vast number of worm farms, made from old bathtubs and other recycled materials
- number of compost heaps supporting growth of vegetables
- each garden differs. Depending upon volunteers, times of year and requirements

Earthwise Garden

Similar process:
Food scraps

'Compost Cake':
grass clippings, manure, twigs,
straw, water,
plus the food scraps

Time is needed

Various uses in the garden



Chicken Coop Made with recycled material.



Chicken coop made from old water tank frames; All council guidelines are strictly followed

By-products for sale at Earthwise



Every Earthwise garden sells different products. This is a sample

Students bring food to school or university



- Utilise re-usable containers and cutlery
- Reduce food waste by consuming food from their own household or leftover meals
- Avoid food packaging

As a result, this encourages healthier food choices, reduces food waste and is better for the environment.

What happens next?



Whilst students bring containers and cutlery to school, there are no facilities to clean these items or clear signage and designated bins to dispose of excess food. Students take home dirty containers and food waste goes into the general waste bins onsite.



This process does not align with best practice in food hygiene or waste sorting.

Proposal for students



Wash stations to wash and dry containers – a sink, running water and detergent



Clearly labelled waste bins that align with the WA government implemented 3-bin FOGO system



The collection of food waste on campus to be used as compost for the garden, to feed worms or chickens (depending on the school or university)



Implement advertising and an education program to educate students on best practice

Edith Cowan University

All campuses



- Maps and alignment with wash stations for students to use
- Sustainability options/ labelled bins including food waste options
- Link to student guild, interactive options.
- Promote and support positive practices.

Acknowledgements

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- Images are student's own, stock free, or acknowledged intext.