



Auburn Girls High School

From throwing to sowing: A unique, student-led research project comparing different composting systems and techniques

Project background

In 2023 Auburn Girls High School used a sustainability grant of \$11,000 to implement a compost trial to facilitate collaboration between Year 7 Library Skills and the Food and Agriculture unit.

As well as offering cross-curriculum learning for volunteer students across year groups about the real-world problem of food waste, practical skills were developed by the students about how to turn organic waste from the canteen in to compost 'gold' for the school vegetable garden.

A rainwater tank that harvested rainwater from the roof was also installed in the library courtyard as a visual reminder to show how much water is in food and for watering the garden.

Project goals

- To measure and compare the efficiency and ease of use of six different compost design types. The underlying question was, "What is the best compost method for new, first-time composters?" Students asked and answered questions about: usability, durability, volume, ventilation, production of worm juice and purpose of the compost design.
- To provide a rich mix of data collection and analysis and quantify the amount of food waste turned to compost for use on school plants and trees.
- To reduce and ultimately end food waste and associated waste costs at the school.

Changes implemented

The school's teacher librarian had expert advice and support from sustainability advocate Michael Mobbs who, along with his university student interns, worked on the project weekly, educating students in workshops and breaks, upkeeping the garden and ensuring the progression of the project.

Library Monitors formed a Compost Club and roster for collecting food waste caddies and containers from staffrooms, the canteen and from green wheelie bins around the school. The organic waste was weighed at a weighing station in a newly created 'Compost Garden'. Voluntary membership of the Compost Club grew, and workshops were provided to educate students about creating compost, growing soil and plants, using the different types of compost bins and for evaluating data.

A sustainability guide in the online library catalogue was created for uploading student videos and information for the project. A Google Classroom was also used for communication, and Google apps were used for logging food waste weights and conducting surveys.

The Book Week theme 'Read Grow Inspire' helped to create links between the school's Book Week event and the compost trial.

Impact of changes

Before the composting project, the food waste at the school resulted in an estimated 1,350 kilograms of carbon being emitted per garbage pick-up. After the composting trial, that number was nearly halved, to 757 kilograms per food waste pick-up. It was estimated that this can result in \$5.09 in savings per student per

year for waste pick-ups, or \$4 million if replicated for the 790,000 students across the New South Wales public school system.

Project highlights

- Finding cost reductions could be achieved across NSW through turning food waste into compost.
- Local member of parliament Lynda Voltz visited the new Compost Garden to speak to us and she gave a speech in the NSW parliament praising the project.
- The report was prepared by the students and the teacher librarian, and their survey results showed they found one product, the coolseat, was the easiest to use and was also a place to sit on.
- Collaborating with community and across year groups: working with the sustainability advisor and university students, having parents help, working together with students of all ages and from the Special Unit.
- Creating a new garden and making a disused part of the school beautiful.
- Learning to use different types of compost devices, meeting worms, learning that compost can hold water and help to maintain gardens even in dry weather.
- Students enjoyed creating short videos on LearnPath in the Oliver Library Catalogue for educating others about how to compost and grow new plants.
- Book Week: students enjoyed creating competition entries for Book Week on the theme 'Read Grow Inspire'.

A compost and a seat in one!



Challenges and how they were addressed

- Teachers were time-poor. However, a surprising number of students were enthusiastic about the project and offered their own free time to help. This helped carry the project.

Student involvement

- Library Monitors volunteered to form a Compost Club. Some Year 7 students from the Library Skills classes joined the Compost Club.
- The Compost Club was open to all year groups and grew in popularity.
- A number of teachers also gave their free time to support the project.

Community partnering

- Sustainability advisor Michael Mobbs donated his and his university interns' time, also plants.
- Further help and support was provided by parents.
- Local member of parliament Lynda Voltz championed the project in parliament and on social media.
- Bunnings donated equipment and plants.

Advice for other schools looking to do a similar project

- Engage a broad range of students and teachers. It also helps to have community partnerships.
- Use at least 3 different compost options.
- Grow plants with your compost: vegetables, herbs, fruit, grains, edible flowers and plants that can provide wind breaks for the garden.
- Catch rainwater to irrigate with.

Future plans

- The school's Compost Club continues to grow, saving food waste and nourishing the garden.
- Year 7 Science teachers plan to use the compost created for the students' seed growing experiments.

25kg

of food waste is now being composted on site each week

“Joining the compost club has been an enlightening journey for me. Not only have I gained practical knowledge about sustainable waste management, but I’ve also found a community of like-minded individuals passionate about environmental conservation.”

Student



A number of different composting systems were used including tumblers, round ground-based compost bins and a cool seat.