



Nambucca Heads High School

Working with community to introduce a circular system of food production and reduce waste to landfill.

Project overview

In 2023 Nambucca Heads High School students implemented on-site composting systems to reduce waste and enrich the vegetable gardens that are used by the school's canteen and Food Technology classes. Products such as food scraps, sawdust, shredded paper and mulched grass were added to a range of different composting systems, and the school is now diverting up to 27 kg from landfill per week.

Background and context

The project built on a small scale trial of mushroom and worm farming at the school during 2021-2022, where disengaged students were empowered with the responsibility of monitoring results, and class attendance for these lessons increased. In addition to sustainability activities embedded in the Strategic Improvement Plan, the school runs a Green Team

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Outdoor Education Program and is involved with projects through Nambucca Valley Landcare such as the Koala Habitat replanting at Valla.

Project goals

- To improve the sustainability of the school by using waste products to produce healthy food options by introducing composting, worm farming, mushroom farming and vegetable gardening.
- To empower students to establish links with local community groups involved in sustainable farming.
- To provide students with 21st century learner skills in a real-world context through cross-curricular, project-based learning.

Project activities and highlights

Community partnering

During the project students were empowered to establish links with small alternative farms in the local community including a compost producer, worm farmer and mushroom grower. This opened their eyes to opportunities for sustainable employment post-school.

Student engagement

Teacher comment: “Whether it was collecting scraps or raking ‘hay’ from the paddock next door, students were asking to do composting on a regular basis, and all students engaged enthusiastically in the making of compost. Our support unit students have embraced the scrap collection and this will enable the project to be embedded into our school on an ongoing basis.”

Real-world applications

Student comment: “Using the compost from the tumbler and the products of the worm farms really showed the natural processes that can benefit the growth of plants in our gardens and how we can encourage and implement these factors to create our own produce.”

Future learning opportunities

Students are continuing to explore where their food comes from and how small decisions they make about their food and waste choices can make a large difference to our community. They are also developing an understanding of nutrient cycling and the importance of healthy soils as the keystone for their own health.



27kg of waste per week is now being diverted from landfill to produce compost for the school's vegetable gardens.

Curriculum links

Year 7 Science: Mini Things unit (syllabus outcomes SC4-14LW, SC4-15LW; content LW3d)

Year 8 Science: Classification (syllabus outcomes SC4-14LW, SC4-15LW; content LW5c)

Year 8 Tech Mandatory: Agrifoods (syllabus outcomes TE4-1DP, TE4-2DP, TE4-3DP, TE4-5AG)

Year 9 Science: Ecosystems (syllabus outcomes SC4-14LW, SC4-15LW; content LW2)

Year 9 Agriculture: Vegetable Production and Compost and Worm Farming (syllabus outcomes AG-1, AG-2, AG-4, AG-11, AG-13, AG-14)

Year 10 Agriculture: Vegetable Production, Animal Production, Plant Production (syllabus outcomes AG-1, AG-2, AG-6, AG-8, AG-9, AG-11, AG-12, AG-13, AG-14)

Different composting systems and technologies used



Tumbler compost systems provide increased airflow and easier turning.



Traditional compost piles require more space and frequent turning to break down.



Thermometers help to measure if the compost is getting hot enough to break down.