

# Case Study

<b>Name of School:</b>	<b>Bargo Public School</b>		
<b>School Post Code:</b>	<b>2574</b>	<b>Project Completion Date:</b>	<b>Ongoing (Bronze award by end of 2014)</b>
<b>Eco-Coordinator:</b>	<b>Sarah Adam</b>	<b>Current Award Level:</b>	
<b>Project Title:</b>	<b>Waste and Energy</b>		

<b>Eco-Schools Topic: Please enter "X" in relevant boxes</b>			
<b>Water:</b>	<input type="checkbox"/>	<b>Healthy Living:</b>	<input type="checkbox"/>
<b>Waste:</b>	<input checked="" type="checkbox"/>	<b>School Grounds:</b>	<input checked="" type="checkbox"/>
<b>Litter:</b>	<input checked="" type="checkbox"/>	<b>Biodiversity:</b>	<input type="checkbox"/>
<b>Energy:</b>	<input checked="" type="checkbox"/>	<b>Global Perspective:</b>	<input type="checkbox"/>
<b>Transport:</b>	<input type="checkbox"/>	<b>General:</b>	<input type="checkbox"/>

## Guidance Notes:

- Please type in the boxes below. The boxes will expand automatically with the text when entered.
- You are more than welcome to separate your projects out into different case studies or cover a variety of projects within the one template.



## PROJECT BACKGROUND

**Why did you decide to undertake this project?** (I.e. was it a particular issue in school or part of a larger campaign) We decided to improve upon our waste output after conducting a waste audit with the local council. Food waste and recyclables were going to landfill as there were no other options offered within the school. Our school's energy bills have also increased after being put onto the domestic grid. Any money that we can save whilst reducing our carbon footprint is a bonus.

**What aims did you have starting out?**

To reduce the amount of landfill produced by our school, and to reduce energy consumption. In the future, we would also like to beautify the gardens around the school, and increase the number of native plants around our grounds.

## ACTION

**How was the project delivered?** The project is ongoing. We are working with the local council to reduce waste being sent to landfill. Students are monitoring energy usage, and beautifying gardens.

The local council has provided us with recycling bins and extra recycling pick up each fortnight. We used existing small bins around the school and painted them with yellow stripes so students identify them as recycling bins. These are collected several times a week and sorted into the large bin.

We are in the process of acquiring sealed buckets to make Bokashi buckets for food waste. We have decided to use these as the food waste will not need to be sorted, unlike worm farms. Classes will take turns to feed food scraps to the chickens, and the excess will be placed in the Bokashi buckets. Once the food has broken down it will be buried in the gardens and the compost heap, hopefully making it a functioning compost heap that can be used on gardens around the school.

Several times a week, students monitor the energy usage in the classroom. From next term, they should be able to do this everyday without the guidance of a teacher. They check each classroom to see if lights, fans, air conditioning or the interactive whiteboard have been left on during break times. Classes who remember to turn everything off for a week are provided with an Eco Ticket, which puts them in the running to win a canteen voucher and the title of King or Queen of the Environment. Teachers are encouraged to leave lights off during class time if possible (some of our classrooms are very dark).

**Was the project topic integrated into the curriculum? If so, please describe how.** Next term (term two, 2014) we will be integrating the landfill portion of the project into the mathematics curriculum. We will be doing this using a pedagogy called Self Organised Learning Environments (SOLE). Students will be given guiding questions relating to landfill and waste within our school, and will be required to conduct self organised research in groups to solve problems.



## PUPIL LEADERSHIP

**How did you get the pupils involved? How did they have ownership?** We have an Eco Committee led by our school leadership team. Students have also volunteered, and while we have a roster, we constantly have students wanting to participate on a daily basis. The students have driven the projects being undertaken, with direction from three teachers. Students love to care for the chickens, and collect their eggs. They help clean out their coop twice a week. The students are learning to care for the trees in the citrus grove by pruning, harvesting fruit and watering, and how to tend to the native gardens around the school. We have also taught them to conduct energy audits of the school. We have only been working as an Eco Committee for nine weeks, so have been modelling behaviour and guiding the students, and as they feel comfortable we will increasingly give them more responsibility.

## FUNDING

**Did you have to source funding for the project?**

We are currently sourcing funding from a variety of organisations. We are working in partnership with our local council who have provided us with bins for recycling and items to use in a school clean up. A small amount of funding is available through the school's existing curriculum budget.

## PROJECT SUPPORT

**Did you receive any support from parents, staff or outside agencies in regards to the project?**

The school staff members are very supportive. Change will take time, but they are all helping with the efforts. Two families have come forward to help with the gardens and a future project we will commence later this year. We have been working with the local council since November 2013. They are providing us with advice, guidance and support to complete our projects. We are part of the Eco Schools pilot program, and the SEED committee of local schools. Each term we meet and provide each other with support and advice. This also gives us access to other agencies in our local area. We have also been supported by the Camden Park Environmental Education Centre, who began the Eco Schools pilot and provide us with information, support and advice.



## CHALLENGES

### **Did you have to overcome any challenges to make the project succeed?**

The main challenge has been (and will continue to be as the project expands) changing the students' habits, especially when related to waste management. They have become accustomed to throwing all rubbish in the bin, rather than separating it themselves. We are also trying to complete our project with a very small budget, which may change if we are successful in gaining grants.

## RESULT

### **How have the pupils benefitted from the project?** (E.g. knowledge gained, skills learnt, an improvement in behaviour, attainment or attendance?)

The students have gained knowledge regarding waste management and recycling. They are conscious of where their rubbish goes, and are trying to minimise waste in our school. The students have learnt about different plants, how to remove weeds, and how to trim and care for our fruit trees.

They have been given the opportunity to learn how to care for chickens. They have been given responsibility for collecting eggs, monitoring food and water, and cleaning their coop. Next term, they will be collecting food scraps to feed to the chickens.

Some students in our support class have been very enthusiastic about being part of the Eco Committee. They have started to show leadership qualities, and are keen to share their skills with other students.

### **Have there been any other benefits for the school as a result of the project?** (E.g. reduced costs, cleaner school, etc). **Please include any figures and analysis if appropriate.**

As we have only been monitoring our energy usage for a short time, I do not have any data at present. The school is cleaner, and there is noticeably less waste in the general rubbish bins, and more in the recycling bins. I believe the biggest impact will come once we have Bokashi buckets in use (next term), and food waste will be properly disposed of.

Students are also interested in bringing no waste lunches to school, and as a result of this interest the canteen has started to sell reusable lunch bags. The interest was driven by students talking to their parents and the canteen owner, and was not instigated by the Eco Committee.

Next term, we will repeat the waste audit and we will be able to track the reduction of waste due to the changes we have made.

## IMPACT

### How did you measure and monitor the impact of the project?

We will be monitoring the impact of the waste reduction by conducting repeat waste audits. The students collected a day's worth of rubbish from the school's bins, separated it and weighed it. It was recorded on a spreadsheet and graphed. This process will be repeated so we can track the reduction of the waste across the school.

The students will also compare electricity bills and usage to monitor the reduction of the usage. The students will be able to graph these results.

The gardens will provide visual evidence of what the students have been doing, and will allow them to see results of their hard work.

## EDUCATIONAL RESOURCES

### Have you used any educational resources or participated in any local or national campaigns or events? (If yes, indicate which activities you have taken part in)

As a school, we took part in Clean Up Australia Day. The local council provided gloves and bags for students to collect rubbish.

I have a membership to Cool Australia, and regularly share resources and information with other teachers.

I will be working with the local council during the year to write educational resources that can be shared among other schools.

## LESSONS LEARNED

### What advice would you give to schools that want to follow in your footsteps?



Begin with the end in mind – we conducted a rubbish audit and this formed our direction and the main part of our project. By allowing the students to drive the audit and visibly see how much food we were wasting, and how many recyclable items were being sent to landfill, they wanted to initiate change.

The students and other staff members have been consulted with, and have given feedbacks and further ideas for projects.

Relinquishing a certain amount of control can be difficult, but by allowing students to drive projects and suggest ideas, they are passionate about the work they are doing and enjoy being involved.

## NEXT STEPS

### Has this project inspired or driven other Eco-Schools ideas? What is the school working on next?

We will be participating in a Mud Fun program with the local council. Our aim is to build a wood fire pizza oven that we can use for community events and fundraising. We will be launching this project at our Spring Fair in October. In conjunction with this, the students would like to investigate building a greenhouse to grow herbs and vegetables to put on the pizzas.

We would also like to extend our chicken coop so it will over arch the citrus grove and allow the chickens to run free range. We would also like to investigate purchasing some ducks.

## EXTERNAL SUPPORT

### Has your school received any local council support with regards to the Eco-Schools Program?

Yes. Wollondilly Council's environmental officer has been a wonderful help and is very willing to help us with any projects.

Please return your completed case study and any relevant photographs to [info@eco-schools.org.au](mailto:info@eco-schools.org.au)

We will endeavour to publish it on the Eco-Schools website as soon as possible.

[www.eco-schools.org.au](http://www.eco-schools.org.au)

