

## Eco-Schools Case Study

<b>Name of the School:</b>	<b>Caroline Chisholm Catholic College</b>		
<b>City/ State/ Territory</b>	<b>Melbourne/Victoria/Australia</b>	<b>Project Title:</b>	<b>SOUL leaderships program – raingarden project</b>
<b>Eco-Coordinator's name:</b>	<b>Paul Barber</b>	<b>Project Completion Date:</b>	<b>11/06/2021</b>
<b>Age group of participating students</b>	<b>Year 9 – age 14-15</b>	<b>Current Award Level:</b>	<b>Silver</b>
<b>Eco-Schools Theme: Please tick relevant boxes</b>			
<input type="checkbox"/> Biodiversity		<input type="checkbox"/> Litter & Waste	
<input type="checkbox"/> Energy & Climate		x Waste & Waterways	
<input type="checkbox"/> Fair Go		x Water	
<input type="checkbox"/> Healthy lifestyles			

### 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)
- **What aims did you have starting out?**

The SOUL program raingarden project was developed from an identified need for active water conservation and increased sustainability education at our College. This was raised as a result of our 2020 sustainability audits for Eco-Schools, Resource Smart Schools and Catholic Earthcare in the areas of Waste, Water, Energy and Biodiversity.

The purpose of the Raingarden Project is to install a raingarden at Caroline Chisholm Catholic College to filter stormwater and rainwater runoff. The project meets St John's Campus and Caroline Chisholm Catholic College's need for addressing sustainability targets by filtering and repurposing storm water. The installation of a portable raingarden will also support the learning and teaching program at the College. The successful completion of the Raingarden Project and the ongoing use of the raingarden will help the College achieve its mission in being Leaders in Sustainability and Learning Excellence.

## ACTION

- **How was the project delivered?**

Students involved in the SOUL (Strengthening Our Understanding of Learning) Leadership Program were employed as project managers and provided with the water conservation project brief as follows:

*Design, construct and install an educational raingarden to filter storm water from rooftop runoff.*

As project managers, students were required to follow the following inquiry process to meet the project brief.

Inquiry process:

1. Research
2. Analysis
3. Planning
4. Action
5. Presentation

In addition to the inquiry process described above, the SOUL students were encouraged to follow a structured project management process to ensure the brief was met and the raingarden delivered in full and on time. The project management process followed the steps illustrated below:

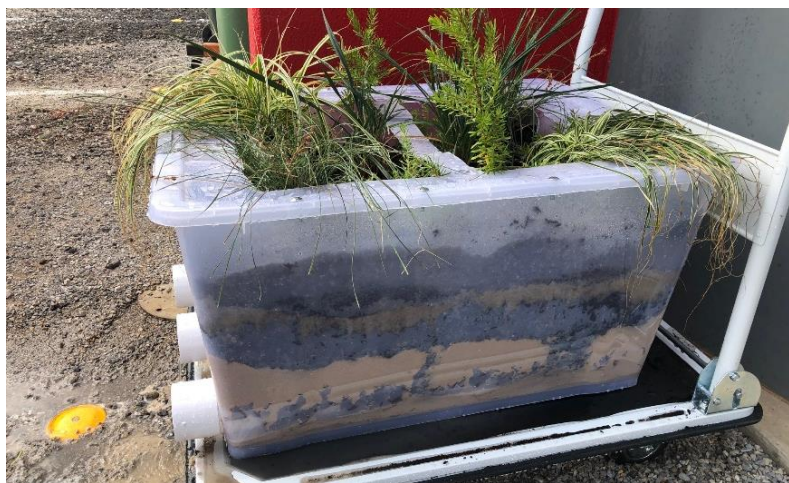


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The project deliverables shall include a detailed plan and design of the raingarden, construction and installation of the raingarden, resource list, budget, scope statement, risk management, stakeholder management, key milestones, timeline, status reports and Gantt chart. A plaque acknowledging design and construction team

The objectives of the Raingarden Project are to research, design, construct and install an effective, high quality, cost effective raingarden system to filter and repurpose storm water, clean the environment, support learning and teaching objectives and meet sustainability targets.



- Was the project topic integrated into the curriculum? If so, please describe how.

## SOUL Leadership Program

Year: 9. 2021

**Unit Title: Strengthening our Understanding of Learning Leadership Program**

**Duration: 8 week(s) (32 x 72 minute lessons)**

### Unit Descriptor:

In this area of study students explore the inquiry process and project management. In line with the College Sustainability Action plan, students will design, construct and install a raingarden to filter storm water from rooftop runoff. Students will follow the inquiry process and fulfil the responsibility of project managers for the entirety of the program. Students will work collaboratively to develop leadership, resilience, communication and effective team work skills. The SOUL program provides a fully integrated and project-based approach to learning which will enhance key skills and characteristics that are transferable to all learning situations.

### Connection to Victorian Curriculum Standards:

This unit is written in line with The Victorian Curriculum F-10. For details of the achievement standards refer to the website <https://victoriancurriculum.vcaa.vic.edu.au/>

### Teaching Strategies:

This unit incorporates learning and teaching experiences that are student centred, differentiated and informed by timely and authentic feedback. Teaching strategies are consistent with examples outlined in the Caroline Chisholm Catholic College Learning and Teaching Policy. (The Policy is available on the College Intranet).

### Key Knowledge & Skills:

Investigate, design, construct and install a raingarden to filter storm water from rooftop runoff.  
Appropriate documentation: project charter, scope statement, risk assessment, work schedule, Gantt chart  
Demonstrated knowledge and application of Inquiry Process and Project Management Process  
Teamwork, collaboration and effective communication  
Reporting, review, analysis, construction, installation, delegation, written and verbal communication, resilience, leadership, adaptability, time-management, collaboration, reasoning, research, questioning, meta-cognition, recognition and expression of emotions, eliciting feedback, speaking and listening.

### Assessment Details:

Formative assessments of students will be conducted by observational data of student interactions, completion of assigned activities, discussions, responses to questions.

Summative assessment of this unit will be carried out by students Raingarden Project Portfolio and Construction



## STUDENT LEADERSHIP

- **How did you get the students involved? How did they have ownership?**

The Caroline Chisholm Catholic College raingarden project was facilitated as a student learning and sustainability program. With each student being appointed as a legitimate project manager for this venture, their ownership of the project was natural and immediate. As a team, each individual was appointed a specific role which they were to undertake for the coming week with roles rotated weekly. This provided an opportunity for not only authentic ownership but authentic leadership within the project.



## FUNDING

- **Did you receive funding for the project?**

No funding was received for this project although the materials were sourced using payment from the school's overall sustainability budget. Total cost was under \$300.

## PROJECT SUPPORT

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

As an interdisciplinary program, support was provided by staff from numerous other curriculum departments within the College, these included Maths, Science, Technology and Design. Advice was received from numerous outside agencies in the form of student research into design, functionality, engineering and filtration medium selection.

## CHALLENGES

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

The noted risks for this project by the participants were delays in construction or resource management as a result of COVID, inflated cost (materials) and sourcing alternative resources when the preferred materials are unavailable. These resulted in the time frame being extended.



## RESULTS

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

### Key Knowledge & Skills:

Investigate, design, construct and install a raingarden to filter storm water from rooftop runoff.

Appropriate documentation: project charter, scope statement, risk assessment, work schedule, Gantt chart

Demonstrated knowledge and application of Inquiry Process and Project Management Process

Teamwork, collaboration and effective communication

Reporting, review, analysis, construction, installation, delegation, written and verbal communication, resilience, leadership, adaptability, time-management, collaboration, reasoning, research, questioning, meta-cognition, recognition and expression of emotions, eliciting feedback, speaking and listening.

The members of the SOUL Leadership team have demonstrated a notable increase in their engagement with their learning throughout the curriculum along with numerous teachers noting that “*they all seem a bit more mature*”. It has also been noticed that they are more proactive with not only their schooling but also in the area of sustainability with numerous members of the group joining the Eco-Committee and volunteering to present their work at the 2021 Kids teaching kids conference being hosted at our school later this year.

- **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**

Aside from the student’s learning and the functional aim of the raingarden which is to filter potentially polluted water from the school building rooftops, the other major benefit from this project is the final product of the raingarden which was designed as a learning tool to be used by other departments such as science, technology and humanities. This is demonstrated by the transparent casing of the raingarden as well as the labelling of filtration medium. This is also evident in the participant’s readiness to physically demonstrate the raingarden in action for both teachers and students and to promote sustainability throughout our learning community.

## IMPACT

- **How did you measure and monitor the impact of the project?**

The project was tested and adjustments made to ensure its functionality before it was demonstrated publicly.

The real measure of its success will tell over time with its use by teachers and other students in a variety of other learning programs and hopefully it will inspire further sustainability projects for all members of the College community.

## EDUCATIONAL RESOURCES

- **Have you used any Eco-Schools educational resources? (If yes, indicate which ones)**

We used an adaption of the Eco-schools 7-step framework to provide structure for the project and develop a scope and parameters for the development and facilitation of the SOUL program raingarden.

## LESSONS LEARNED

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

- Whole school buy in.
- Actions speak louder than words.
- Not just student involvement but full student ownership, and leadership.
- Do not be discouraged by roadblocks/speedhumps or other resistance.
- Although the project may not be the most important or pressing sustainability item according to school audits, every sustainability action is important so we must do what we can when we can.

## NEXT STEPS

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

Historically we have always had a strong sustainability program. This project and our involvement in the Eco-schools program has inspired us to lift the profile of sustainability within the College community which has resulted in a notable increase in membership to our Eco-committee. The increased in interest in sustainability has provided further opportunities for action in a diverse range of ecological issues. This has led to an ongoing whole school action plan for all areas of sustainability. In the process of pending new developments at our Outdoor and Environmental learning facility in Meredith 'Garema' many new sustainability projects will be incorporated. These include Butterfly feeders and insect hotels, significant species plant labelling, raingarden, kitchen garden, compost area and worm farm, outdoor sealed bins, an indigenous nursery and an orchard.

## EXTERNAL SUPPORT

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

n/a

Please return your completed case study and attach 1-2 photos to [marina@kab.org.au](mailto:marina@kab.org.au)

We will publish it on the Eco-Schools website and newsletter, as well as showcasing your school on our social media channels!

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

Thank you!