

Case Studies

Model Solar Car and Environmental Technology

Middle Years

Urrbrae Agricultural High School

Partners: School students
Some support from AGL

The model solar car project aims to:

- Design and construct a model solar powered car to compete against other schools
- Build knowledge of materials and processes, and understanding of solar energy and limitations

The environmental technology project aims to:

- Design and construct devices to produce energy from the wind
- Analyse limitations of alternative energy
- Design and construct devices to measure water flow
- Understand water management, erosion and conservation

Environmental studies are an integral part of the school curriculum. Farm management, animal care and associated water and environmental conditions are the school focus. The above involvement is not a project as such, more a collection of design, construct and evaluation problem solving tasks.

The success of the program is determined by

- Student evaluations
- Critique of products, systems and technologies

Links between classroom work and environmental project

Associations and links are formed between classroom studies, investigations and practical exercises.

Environmental Reporting Themes and Issues for this project

Themes

Issues

Coasts and the sea • Health of the Marine and Coastal Environment



Inland Waters



- Rivers, Streams and Wetlands
- Water Use
- River Murray

Human Settlements



- Water Consumption in Urban Settlements
- Energy

Environmental Reporting Themes and Issues for this project

- Design and Technology
- Science
- Society and Environment

Elements of the Essential Learnings that your project develops

Futures

- Learners developing an understanding of patterns and connections within systems
- Learners building scenarios of preferred futures

Identity

- Learners developing an understanding of themselves, of the groups to which they belong, and of other members of their community
- Learners developing the capacity to relate effectively to others and to resist the pressure of negative stereotyping

Interdependence

- Learners coming to an understanding of what is needed

for sustainable social and physical environments.

- Learners cooperating to achieve agreed outcomes.
- Learners acting to benefit their communities.

Thinking

- Learners using a wide range of thinking modes.
- Learners developing and employing enterprising attributes.
- Learners developing enterprising and creative solutions for contemporary issues.

Communication

- Learners having an understanding of how communication works.
- Learners having the ability to make effective use of language, mathematical information and the tools of information and communications technology.
- Learners being able to effectively use communication in a range of modes.