Overview

Planning and Design for Sustainability is a whole day program introducing students to the social, economic and environmental considerations for sustainable development. The program enables students to develop an appreciation of the links between resource use, conservation and environmental sustainability. Students make and test predictions of energy consumption of a variety of household appliances using energy data loggers (PowerMates). This assists students to learn about their own energy consumption and financial and environmental benefits of reduced energy use.

A self-guided tour of the EcoCentre is undertaken by students to identify the environmental benefits of a range of passive and active sustainable design features (e.g. rammed earth walls, natural ventilation, solar energy generation and water conservation). Students also visit the Sir Samuel Griffith Centre at Nathan Campus to see Australia’s first zero-emission, self-powering teaching and research facility. The building has been given a 6-star green rating and runs on hydrogen and solar power.

Students apply their new knowledge in small groups to construct a sustainable house. Groups consider various features and budget constraints in an effort to reduce their resource use and environmental impact. After constructing their house, students justify and discuss their decisions.

Planning and Design for Sustainability has been assessed as medium risk. A Curriculum Activity Risk Assessment is available on request.

Curriculum Intent

Geography – Social Environments – Sustaining Communities
- A community exists within a physical environment characterised by climate (KI.1)
- Planning is a process that may operate on many levels e.g. local level through solar orientation of buildings (KI.7)

Sustainability
- Designing action for sustainability requires an evaluation of past practices, the assessment of scientific and technological developments, and balanced judgments based on projected future economic, social and environmental impacts (OI.8)

Graphics – Design factors
- To develop sustainable solutions consideration must be given to the impacts of social, economic and environmental sustainability in all stages of the design process