



Stage 5 - Geography Sustainable Biomes

PROGRAM OVERVIEW

Camden Park EEC is located 75km south west of Sydney CBD, on the Elizabeth Macarthur Agricultural Institute (EMAI) - a 1,600ha NSW government livestock research property operating commercial sheep flocks and a beef cattle operation. Students investigate the physical characteristics of rural land with an emphasis on examination of human alterations for food production.

KEY QUESTIONS

What are the physical characteristics of EMAI and how are they altered for food production?

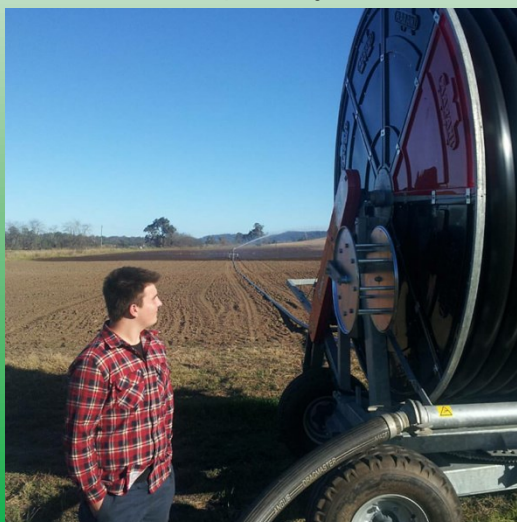
How is technology used on farms to improve yields?

What environmental challenges can limit food production on EMAI?

LEARNING EXPERIENCES AND CONTENT

GEOGRAPHICAL TOOLS

Students will use and create a range of tools and techniques to examine and compare physical characteristics and productivity of agricultural land, for example; maps and images, digital measuring equipment (soil, water, atmosphere as well as livestock inputs/outputs) and landform and soil measurements for land capability assessment.



EXPERIENCES

Assessment of physical characteristics of the farm will inform examination of human alterations and the impact on the environment and agricultural productivity. Students measure physical aspects of live sheep in order to appreciate the importance of skilled management to avoid damage to a fragile environment. Different areas of the farm are assessed and compared for agricultural land capability and actual productivity; water quality and wildlife diversity are assessed as indicators of surrounding land management sustainability. Students record impact of mitigation strategies, observe an aquaculture unit as a possible solution to food security issues and use technology to measure commercial traits in cattle to assess suitability for particular domestic/export markets).



SUSTAINABLE BIOMES - OUTCOMES

GEOGRAPHY K-10

- GE5-1** explains the diverse features and characteristics of a range of places and environments
- GE5-2** explains processes and influences that form and transform places and environments
- GE5-4** assesses management strategies for places and environments for their sustainability
- GE5-7** acquires and processes geographical information by selecting and using appropriate and relevant geographical tools for inquiry
- GE5-8** communicates geographical information to a range of audiences using a variety of strategies

GEOGRAPHY CONTENT

This program teaches:
Sustainable Biomes - use and alteration for food production

STUDENTS

- Investigate the distribution and physical characteristics of biomes (ACHGK060)
- Investigate the human alteration of biomes to produce food and the environmental effects of these alterations (ACHGK061)
- Investigate environmental, economic and technological factors that influence agricultural yields in Australia and across the world (ACHGK062)

