



Stage 5 – Geography Sustainable Biomes

Glenola Farm, Yarramalong

Program Overview

The Geography Inquiry Process will be used to investigate the human alteration of biomes to produce food and the environmental effects of these alterations. Students will visit "Glenola Farm", an historical beef Cattle property.

Key Questions

1. How do people use and alter biomes for food production?
2. What are the features of this environment?
3. How does human use of the Yarramalong Valley impact habitat, biodiversity, water quality and water supply?
4. What are some strategies to reduce human impact at Glenola Farm?

Learning Experiences & Content

Geographical Tools

Students will use a variety of geographical tools to acquire, process and communicate geographical information such as maps and fieldwork instruments e.g. anemometers, light meters, clinometers and water and soil testing instruments.

Mapping

Students will enjoy a tour of the farm and will map the sustainable features present, including the solar powered, self-sufficient watering system and the revegetated billabong and wetland.

Water Testing

Students will be shown the Wyong River streambanks which were restored from a degraded state due to over 100 years of farming. Water testing equipment will be used to measure the water quality of the river which ultimately supplies water to our drinking water supply.

Abiotic Measurements

The vegetated streambanks and the adjacent cleared farmland will be compared to highlight the effect of removing vegetation. They will use a variety of instruments to measure abiotic



factors including anemometers, light meters and clinometers to gather the results.

Soil Testing

The issue of soil degradation and the impact of livestock will be discussed with students. They will then use soil testing equipment to measure the condition of the soil at three locations. These sites will include the vegetated area, within a paddock and the compacted zone near the watering trough.



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Outcomes

Geography 7-10

- ✿ **GE5-1** explains processes and influences that form and transform places and environments.
- ✿ **GE5-2** analyses the effect of interactions and connections between people, places and environments.
- ✿ **GE5-3** accounts for perspectives of people and organisations on a range of geographic issues.
- ✿ **GE5-5** 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

Students:

- ✿ investigate the human alteration of biomes to produce food, industrial materials and fibres and the environmental effects of these alterations, for example:

(ACHGK061)

- examination of human alterations to the physical characteristics of biomes e.g. vegetation removal, agriculture
- assessment of environmental impacts of human alterations to biomes e.g. habitat and biodiversity loss, water pollution, salinity
- discussion of successful sustainability strategies that minimise environmental impacts.

