

STAGE FIVE GEOGRAPHY

# Sustainable Biomes

## Biodynamic Agriculture

Case Study: Lowe Family Wine Co



### UNIT OVERVIEW

This program investigates how humans alter biomes for food production and how biomes can be used sustainably to increase global food security. Using Lowe Family Wine Co as a case study, students will explore organic and biodynamic agriculture as a strategy to increase the health, diversity and resilience of the biome. Students will consider the relationship between sustainable agriculture and global food security.



### GEOGRAPHY OUTCOMES

**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

**GE5-3** analyses the effect of interactions and connections between people, place and environments

**GE5-5** assess 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



### CONTENT & KEY INQUIRY QUESTIONS

- *How do people use and alter biomes for food production?*
- *What strategies can be used to increase global food security?*

Students will:

- investigate strategies to minimise environmental impacts of agriculture
- examine and analyse organic and biodynamic practices as a strategy to achieve food security



## Pre- and Post-Materials

Schools will be supported prior to undertaking fieldwork with high quality teaching and learning activities including mapping skills, data analysis and investigating background information. Students will develop an understanding of sustainable and regenerative agriculture as a key strategy to ensure food security into a changing future. Suggested assessment tasks to be completed at the conclusion of the study will also be provided.

## Farm Tour and Expert Q & A

Students participate in a walking tour led by an expert, exploring the various enterprises operating at Tinja Farm and how they interact and ‘stack’ to foster sustainability. Students will have the opportunity to ask questions and discuss issues of energy efficiency, waste management, First Nations perspectives and preparing for a changing climate.

## Environmental Assessment: Soil Health

Soil health is considered a key indicator of the sustainability of farming practices. Students will conduct a *soil health assessment* on the farm using a range of field procedures to evaluate the physical, chemical and biological properties of the soil. Students will tour the composting and biodynamic preparation sites and explore strategies used on Tinja farm to improve soil health.

## Organic and Biodynamic Animal Management

Students will tour the various animal management sites on Tinja Farm. They will explore the diversity and purposes of animal enterprises in the system and learn about the strategies, benefits and challenges of organic and biodynamic animal husbandry.

**For bookings or further enquiries about this program, please contact Red Hill Environmental Education Centre on 02 6374 2558 or [redhill-e.school@det.nsw.edu.au](mailto:redhill-e.school@det.nsw.edu.au).**

