



Activity 4: The value of biodiversity in an agricultural landscape.

Summary

This interactive activity uses a range of mediums to encourage discussion about the value of biodiversity (focussing on wildlife) in agriculture and in a broader landscape context.

Student outcomes

This activity will enable students to:

- Define biodiversity;
- Understand the value of biodiversity in an agricultural landscape and the wider community;
- Report on their understanding of the topic using a range of mediums.

Background notes for teachers

Victoria's Biodiversity Strategy (1997) states that biodiversity, or biological diversity, is: *'the variety of all life forms – the different plants, animals and micro-organisms, the genes they contain, and the ecosystems of which they form a part'*. Biodiversity quite simply includes all living things in an ecosystem (including plants, animals and fungi), different types of ecosystems, and recognises the value of genetic differences. Four key reasons have been identified as to why biodiversity is important. These are described below and examples of these are given in the activity.

Ecosystem processes and services - Biodiversity drives many of the processes that make life and agriculture possible by providing a number of ecosystem services. These include; climate regulation, disturbance regulation, gas regulation, water regulation, water supply, erosion control and sediment retention, soil formation, food production, shelter, nutrient cycling, raw materials, waste treatment, pollination, genetic resources, and biological control.

Economics - Biodiversity contributes significantly to the economy in a number of ways. It provides resources for research, tourism and development of foods and medicines. It can also increase agricultural production through the ecosystem services provided.

Aesthetics and culture - Biodiversity is a fundamental part of values such as beauty and tranquillity. Many Australians place a high value on native plants and animals, which contribute to a sense of cultural identity, spiritual enrichment and recreation.

Ethics - No species, and no generation, has the right to sequester (use up and/or take) Earth's resources solely for its own benefit.

Victorian Essential Learning Standards Domains and (Levels):

This activity primarily addresses the Science learning focus and may contribute to achievement of standards at Levels 3-5, other relevant domains and levels are:

Civics & Citizenship (3)
Science (3,4,5)
Communication (4,5)

Duration:
45 mins

Setting:
Classroom

Materials

- Computer
- Data show projector and screen (alternatively students can run through the CD individually on a desktop computer OR the slides can be printed off as a story book)
- 'The value of biodiversity in and agricultural landscape' powerpoint presentation. This can be accessed at www.landlearn.net.au Select Curriculum Activities > for classroom use



The activity

1. Allow students to explore the biodiversity story. During the story, students have the opportunity to guess what species is on the screen, where it lives, what it eats and its value. Encourage students to guess what the answers are before the answer flicks up.
2. Once the story is complete discuss with students the wildlife species they may have in their backyard and the value that those species may have.
3. Encourage students to choose one of species featured in the biodiversity story and prepare a poster, a newspaper article, a pamphlet, a short play, a talk or presentation that informs their chosen audience of the value that this species provides for agriculture and the wider community.



Extension activities

A number of other LandLearn activities explore biodiversity and people's values.

These are:

- **Meet the locals** (a food web activity)
- **Biodiversity - our food supply depends on it, and**
- **Exploring values**



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