Overview

Terrestrial Ecosystems: Years 11-12 SIP

Toohey Forest Environmental Education Centre

Science in Practice 2024

Unit option B: Ecology - Terrestrial

Concepts

Describe:

- Types of ecosystems (abiotic/biotic factors)
- Feeding relationships
- Endangered species
- Adaptations (eg. Fire)
- Aboriginal perspectives
- Flow of matter and energy

Information

Analyse and Interpret:

- Management of numbers for sustainability
- Boom-crash dynamics

Procedures and skills

Execute, Evaluate and Plan

- Methodology to investigate species ecology
- Measurement of materials and variables
- Identification and classification of organisms
- Investigations into ecology

Overview

Terrestrial Ecosystems is a whole day Science in Practice program where students learn to describe the **concepts** of: ecosystem types and their relationships with abiotic and biotic factors, adaptations and Aboriginal and Torres Strait Islander perspectives surrounding quantity and quality of flora.

Students will collect, analyse and interpret biotic and abiotic data to compare and evaluate two ecosystems (wet vs dry sclerophyll forest) within Toohey Forest. This data will then be used to investigate how ecosystems respond and change as a result of fire.

During the program students will **analyse and interpret** information gathered during field work to draw conclusions about the role of fire in ecosystem dynamics. Students will apply a Fire Adaptation Index to plant species in order to investigate floral adaptations to a specific ecosystem, as well as highlighting indicator species used for environmental monitoring.

Students will work collectively to **plan and execute** the investigation of species ecology by identifying and classifying common organisms within Toohey Forest. They will use quadrats to measure plant diversity in different ecosystems, so that land can be managed in a dynamic and sustainable way.

This content aligns to a provided sample assessment which may be used by teachers at your discretion.

Terrestrial Ecosystems has been assessed as medium risk. A Curriculum Activity Risk Assessment is available on request.

w: http://www.tooheyforesteec.eq.edu.au
e: principal@tooheyforesteec.eq.edu.au
p: 07 3735 6557

Queensland Government