

Senior Geography:

Local Land Cover Transformations: Toohey Forest Yr 11 - 12



Toohey Forest Environmental Education Centre



Overview

Situated 9 kilometres from Brisbane City, Toohey Forest is under threat from encroaching development, land fragmentation, edge effect and introduced species that is having an impact on both the native fauna and flora.

The full day program, *Local Land Cover Transformations*, will assist students to understand two local issues. These are the 'triangle of death', which incorporates a section of Toohey Forest where koala death and injuries are unusually high, and secondly, the impact of weed invasion. The program will provide students with the opportunity to collect primary data and access secondary sources to assist in describing the features, elements and interactions between the biophysical environment and anthropogenic processes that shape the identity of Toohey Forest and result in land cover change.

Primary data is collected by students utilising Vernier data loggers (soil moisture, soil temperature, relative humidity, light intensity), soil pH kits, GPS, densimeters and inclinometers. Plant identification keys and quadrats are used to collect diversity and abundance data to calculate a quantitative value to describe species richness, evenness and health of sections of Toohey Forest (i.e. Simpson's Diversity Index). Students will use aerial photos, maps and texts in conjunction with their primary data to evaluate the interactions between the biotic characteristics, environmental conditions of the site and the weed invaders attributes in the target area. This can then be used to infer the impact land transformation is having upon the local wildlife and recommend future management strategies for the site.

The program has been assessed as medium risk. A Curriculum Activity Risk Assessment is available on request. A student field booklet is provided upon confirmation of your

Senior Geography

Unit 3 - Responding to land cover transformations

Topic 2 - Responding to local land cover transformations

Subject matter:

- **Explain** the geographical processes that result in particular physical features (e.g. forests) that shape the identity of places at the local level.
- **Interpret** land use maps to identify where changing land cover has had an impact on the biophysical environment in the local area.
- **Explain** geographical processes that have contributed to land cover change in a local area, including anthropogenic process and natural processes.
- **Use** a conceptual model to identify a local land challenge.
- **Conduct** a field study to collect primary data for investigating land management challenge on a local scale.

