

OVERVIEW



Catchment Studies

Year 11 and 12 Program

Geography - Unit 3 (Topic 2): Responding to land cover transformations

Catchment studies is a day program immersing students in a geographic inquiry to investigate challenges to ecosystem resilience in Bulimba Creek Catchment. This program supports the mandatory practical from Unit 3 Topic 2, Responding to land cover transformations.

During pre-program activities students adopt the role of Geographer and are introduced to what a catchment is and how it demonstrates the interrelatedness of people and environment. They are tasked with gathering vital data needed to manage a catchment sustainably and become familiar with scientific equipment and data collection methodology. Students, challenged to identify issues of concern, formulate questions to focus research during the program.

Using directed qualitative and quantitative data collection at a site within Bulimba Creek Catchment, students describe how a catchment works, its connection to Moreton Bay health, impacts of urbanisation and management strategies.

Field studies, focused around the middle catchment, may include:

- development and impacts on the flood plain / urban changes to riparian zones and its impact on water quality
- impact of increased hard surfaces on storm water quality, volume and flood levels
- water sensitive urban design, replication of natural processes, effect on water quality and storm water impacts
- catchment features and stream characteristics (e.g. categorisation; profiling with emphasis on width of floodplain)
- abiotic and biotic data - water quality and macroinvertebrate biodiversity
- development and impact issues in relation to filling wetlands, building on the floodplain and flooding

Post program, students analyse and extrapolate data using ICTs. They use these results, linked with geographic knowledge, to propose action for sustainable management of waterways and health in Bulimba Creek Catchment.

Curriculum Intent

Geography

Unit 3 (Topic 2): Responding to land cover transformations – Students investigate a local land or water management challenge and explain the geographical processes involved, how these shape the identity of places and impacts of land cover for the biophysical environments and challenges of sustainable responses.

Unit Objectives:

1. explain geographical processes by describing the features, elements and interactions between biophysical and anthropogenic processes that shape the identity of places and result in land cover change of Earth's surface and a changing climate
2. comprehend geographic patterns by recognising spatial patterns of land cover change and indications of climate change at global, regional and local scales of study and identifying relationships and implications for people and places
3. analyse geographic data by selecting and interpreting climate and land cover data and information to infer how patterns, trends and relationships represent a geographical challenge for a specific place in Australia, and in relation to climate change for a selected land cover type

Assessment: Investigation – Field report (IA2)



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