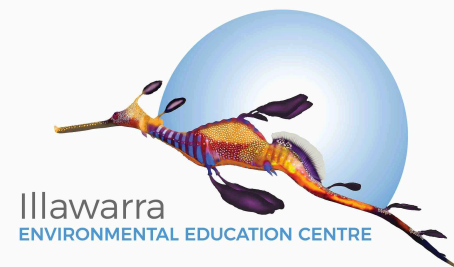


ENVIRONMENTAL CHANGE AND MANAGEMENT

WARILLA BEACH

STAGE 5 GEOGRAPHY

Environmental Change and Management



Location

Warilla Beach

Costs

\$10 per student up to 90 students

\$12 per student over 90 students

Drop off and pick up locations

Students will be dropped off opposite Pep's takeaway on Reddall Parade, and picked up from Little Lake Park on Osborne Parade.



Inclement weather

If concerned please contact Nikki Bodel 0416210542 at 6.45am on the day.

EXCURSION PROGRAM OVERVIEW

Students spend the day travelling from the northern to the southern end of Warilla Beach, learning the biophysical processes that led to the erosion and shoaling issues and they follow four management strategies that are being implemented to address issues at various locations along the way.

INQUIRY AND FOCUS QUESTIONS

How do environments function?

How do people's worldviews affect their attitudes to and use of environments?

What are the causes and consequences of change in environments and how can this change be managed?

Why is an understanding of environmental processes and interconnections essential for sustainable management of environments?

INDICATIVE SCHEDULE

Time	Activity
9:30	Transect northern end Warilla Beach
10:30	Identification of coastal landforms and describing processes that led to their formation
11:15	Recess / Lunch walk to south Warilla Beach
12:00	Site inspection of management strategies to: protect the habitat of Windang Island; people's access to the beach; infilling of Elliott Lake; and overtopping of the seawall by storms
1.00	Create a precis map and line sketch of south Warilla Beach
1:45	Mapping to explain net loss of sand from Warilla Beach.

For more information go to illawarra-e.schools.nsw.gov.au T: 02 42376100



Education
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LEARNING EXPERIENCES



How are sand dunes formed and stabilised by vegetation?

Fieldwork technique: students work in groups to complete a transect to measure and record key vegetation and physical factors at three locations from the incipient dune back.

How do the natural processes of erosion and deposition shape coastal landforms?

Fieldwork: Observing and recording longshore drift and the influence of constructive and destructive waves.

How do we analyse the effect of interactions and connections between people, places and environments?

Fieldwork: Students create a precis map to show influence the groyne has upon the movement and deposition of sand through longshore drift and the subsequent shoaling of Elliott Lake entrance.

Students prepare a line drawing to show the groyne, seawall and bridge. They annotate the line sketch to describe the purpose of each, then critically assess the impact of the seawall upon the rate of beach erosion.

Students critically analyse management strategies to ensure: enabling controlled access to and from the beach; protecting houses and property from rising sea levels and overtopping of the seawall during storms; reduced infilling of Elliott Lake entrance by the infilling of sand via longshore drift.

Why does Warilla Beach experience an annual net loss of sand?

Students label a map of Warilla Beach to show their route and salient features observed during the excursion.

Students undertake a summative task by answering the question as to why natural processes of deposition are inadequate in replenishing sand lost from Warilla Beach.



KEY SYLLABUS OUTCOMES

Geography K-10

S5 - Environmental change and management

GE5-2 explains processes and influences that form and transform places and environment

GE5-3 analyses the effect of interactions and connections between people, places and environment

GE5-4 accounts for perspectives of people and organisations on a range of geographical issues

GE5-5 assesses 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



OTHER SUPPORTING RESOURCES

[Google Site: Investigative study](#) - Six lessons on coastal processes, causes and management of erosion in Australia and the Netherlands, practical activities, Warilla Beach case study and assessment task with marking guide.

[Student fieldwork booklet \(IEEC to print\)](#)

[Answers to student fieldwork booklet](#)

[Powerpoint presentation - background information](#)