### Paluma Environmental Education Centre

- Day trip programs for Picnic Bay (3x 90 minute sessions)
- In partnership with Apex Camp, Magnetic Island

<table>
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<th>Year level and Focus</th>
<th>Year 4 Sandcastles (Erosion)</th>
<th>Year 5 Surviving Maggie (Survival in the Australian Environment)</th>
<th>Year 6 Life around the Bay (Life on Earth)</th>
<th>Year 6/7 Vanishing Australians—The Koala and Curlew (Endangered Species)</th>
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| **Links to the Australian Curriculum** | • Earth’s surface changes over time as a result of natural processes and human activities (ACSSU075)  
• Science involves making predictions and describing patterns and relationships (ACSHE061) | • Living things have structural features and adaptations that help them to survive in their environment (ACSSU043)  
• With guidance, plan appropriate investigation methods to answer questions or solve problems (ACSIS086) | • The growth and survival of living things are affected by the physical conditions of their environment (ACSSU094)  
• There are differences within and between groups of organisms; classification helps organise this diversity (ACSSU 111)  
• Interactions between organisms can be described in terms of food chains and food webs; human activity can affect these interactions (ACSSU112) | |
| **Activity One** | Investigation 1 (Modelled)  
• Walk to the beach  
• PEEC teacher sets up and models application of water to sandcastle  
• PEEC teacher assists students to generate variables grid (booklet) | Differentiating Adaptations  
• Walk through open forest along road to West Point  
• Identify structural and behavioural adaptations of local birds and animals e.g. bush stone-curlew  
• Collect evidence of animals and identify adaptations | Profiling Habitats  
• Build a profile of two plant communities e.g. open forest and mangroves  
• Collect biotic and abiotic data from two different sites  
• Conduct a simple quadrat survey and complete general observations for both sites | Koala and Curlew Walk  
• Walk around Picnic Bay noting opportunities for shelter/food/water (habitat) for koalas and curlews  
• Construct a Needs and Threats Chart for both species |
| **Activity Two** | Investigation 2 (Slope)  
• Students repeat investigation changing the variable to ‘slope’ e.g. of the beach or the sides of the sandcastle  
• Students record and graph results | Exploring Adaptations in Plants  
• Walk down Yule Street  
• Find and discuss plant adaptations  
• Complete collected seeds field study | Feral Plants  
• Discuss the impact of introduced species on native habitats  
• Find and identify feral plants  
• Identify conditions that allow the plants to grow and thrive | Changing Environments  
• Walk to Picnic Bay Museum and observe historical photos of the area  
• With photos provided compare current landscape to old photos, noting any evidence of habitat disturbance or loss |
| **Activity Three** | Investigation 3 (Erosion Mitigation)  
• Using either materials provided or natural materials test the presence of stabilising elements | Photographic Field Study (cameras supplied)  
• Walk to the mangroves on Picnic Bay  
• Identify adaptations that help plants survive in this extreme environment  
• Take photographs and notes of adaptations | Measuring Biodiversity  
• Sample insect population using different methods (coloured bowls, beating trays and sweep nets)  
• Identify insects caught using paper-based and interactive dichotomous keys and digital microscopes | Lifestyles of Koala/Curlew  
• Whole class discussion of similarities and differences in the needs of, and threats to, the two species  
• Conduct a three-step interview and complete a Venn diagram to summarise findings |