Penrith Lakes Safari | Stage 1 | Science

Summary

This excursion addresses outcomes from the NSW Science K-6 Syllabus.

Focus - Science

Knowledge and Understanding - Natural Environment

Substrand - Living World

Students conduct an investigation of a Penrith Lakes habitat and make and record their observations identifying animals, links between them and their environment. Evidence will be collected over the course of the day to answer the inquiry question, "Is Penrith Lakes a good place for animals and insects to live?"

Duration

4 hour on-site excursion to Penrith Lakes Environmental Education Centre.

Arrival time - 9:45am

Departure time – 2:00pm

Arrival and departure times are guides only. Distance and bus schedules may require modifications to the timetable.

About Penrith Lakes

Penrith Lakes Environmental Education Centre is located on Old Castlereagh road near Sydney International Regatta Centre. This great location allows us to provide studies of land and water management at Penrith Lakes along with local heritage sites and the environmental issues associated with the Nepean River and Blue Mountains.

Learning across the curriculum

Cross-curriculum priorities enable students to develop understanding about and address the contemporary issues they face.

Sustainability is addressed through developing in students a sense that people use science in their daily lives including when caring for the environment and living things (ACSHE035).

Outcomes

Science K-10 (inc. Science and Technology K-6)

› ST1-4WS investigates questions and predictions by collecting and recording data, sharing and reflecting on their experiences and comparing what they and others know

› ST1-11LW describes ways that different places in the environment provide for the needs of living things

Geography K-10

› GE1-1 describes features of places and the connections people have with places

Key Concepts

- Observe living things in different places in a local terrestrial and aquatic environment
- Explore and describe the needs of plants and animlas in their environment
- Use scientific knowledge and skills to observe, record and classify living things in the environment
- Describe the features of, and activities in, places

Content

Stage 1 - Living World

Living things live in different places where their needs are met. (ACSSU211)

- describe how some different places in a local land or aquatic environment provide for the needs of the animals or plants that live there

Stage 1 - Features of Places

Features of places

- investigate features of places and how they can be cared for, for example: (ACHGK005)

How places are organised

- investigate activities that occur within places, for example:

Teaching, learning and assessment

Activity 1 – Introduction and Bus Tour of the Penrith Lakes Scheme

- Students enjoy a classroom presentation and bus tour of the Penrith Lakes Scheme where they:
  - Learn that Penrith Lakes is a place where animals, insects and humans interact;
  - Investigate the activities that occur at Penrith Lakes;
  - Identify the reasons this area has changed over time and the role people play in the care of this unique environment.

Resources

Provided by PLEEC:

- Interactive Presentation
- SmartBoard

Provided by visiting school:

- Bus and qualified driver - booked for the day

Content	Teaching, learning and assessment	Resources
(ACHGK007, ACHGK008)		
Stage 1 - Working Scientifically ▪ working cooperatively and individually when participating in different types of guided investigations to explore and answer questions, such as manipulating materials, testing ideas, and accessing information sources, surveys and fieldwork (ACSIS025, ACSIS038) ▪ making and recording observations and measurements honestly, using tally marks and informal units Stage 1 - Living World ▪ describe some external features of a variety of living things, including plants and animals ▪ use a range of methods, including fieldwork, to identify plants or animals in their local area ▪ devise simple classification systems based on the observable external features of plants or animals identified in the local area	**Activity 2 - Resin Insects** ▪ Students observe terrestrial invertebrates in resin distinguishing unique features, classifying them into subgroups and describing their habitat.	Provided by PLEEC: ▪ Viewing tables ▪ Resin insect kits ▪ Terrestrial invertebrate identification charts ▪ Terrestrial invertebrate classification charts ▪ Terrestrial invertebrate habitat charts Provided by visiting school: ▪ Student hats ▪ Sunscreen ▪ First aid kit and student medications
Stage 1 - Working Scientifically ▪ working cooperatively and individually when participating in different types of guided investigations to explore and answer questions, such as manipulating materials, testing ideas, and accessing information sources, surveys and fieldwork (ACSIS025, ACSIS038) ▪ making and recording observations and measurements honestly, using tally marks and informal units Stage 1 - Living World ▪ describe some external features of a variety of living things, including plants and animals ▪ use a range of methods, including fieldwork, to identify plants or animals in their local area	**Activity 3 - Dipnetting** ▪ Students observe aquatic invertebrates in their natural habitat distinguishing unique features and classifying them into subgroups.	Provided by PLEEC: ▪ Freshwater ecosystem with freshwater invertebrates ▪ Dipnets ▪ Invertebrate classification tokens ▪ Specimen jars Provided by visiting school: ▪ Student hats ▪ Sunscreen ▪ First aid kit and student medications
Stage 1 - Living World ▪ describe some external features of a variety of living things, including plants and animals ▪ explore the needs of a plant or an animal in its environment ▪ describe how some different places in a local land or aquatic environment provide for the needs of the animals or plants that live there Stage 1 - Features of Places – description of the natural and human features of placesSTVR – consideration of how a place can be cared for eg a park, farm, beach, bushland	**Activity 4 – Identification of Aquatic Invertebrates and Phasmid/Reptile Demonstration** ▪ During the fieldwork activities, PLEEC staff will collect a variety of aquatic invertebrate species. Back at the Environmental Education Centre, each species will be put under a video microscope allowing students to closely examine and appreciate their external features. ▪ PLEEC staff will help students identify the external features and needs of animals through a live phasmid and reptile demonstration. ▪ Finally students answer the inquiry question, "Is Penrith Lakes a good place for animals and insects to live?"	Provided by PLEEC: ▪ Interactive Presentation ▪ SmartBoard ▪ Video microscope ▪ Aquatic invertebrates ▪ Phasmids ▪ Reptiles