

















<p>Summary</p>	<p>Duration</p>
<p>This excursion addresses outcomes from the NSW Science K-6 Syllabus. <i>Focus</i> - Science <i>Knowledge and Understanding</i> - Natural Environment <i>Substrand</i> - 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?"</p>	<p>4 hour on-site excursion to Penrith Lakes Environmental Education Centre. <i>Arrival time</i> - 9:45am <i>Departure time</i> – 2:00pm Arrival and departure times are guides only. Distance and bus schedules may require modifications to the timetable.</p>

<p>About Penrith Lakes</p>	<p>Learning across the curriculum</p>
<p>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.</p>	<p><i>Cross-curriculum priorities enable students to develop understanding about and address the contemporary issues they face.</i> 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).</p>

<p>Outcomes</p>	<p>Key Concepts</p>
<p>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</p>	<ul style="list-style-type: none"> ▪ Observe living things in different places in a local terrestrial and aquatic environment ▪ Explore and describe the needs of plants and animals 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

<p>Content</p>	<p>Teaching, learning and assessment</p>	<p>Resources</p>
<p>Stage 1 - Living World</p> <ul style="list-style-type: none"> ▪ Students learn that Penrith Lakes is a unique environment where living things can be found and begin to enquire whether the needs of living things are being met. <p>Stage 1 - Features of Places</p> <ul style="list-style-type: none"> – description of the natural and human features of places STVR  ▪ investigate activities that occur within places, for example: (ACHGK007, ACHGK008) – examination of why various activities in an area are located where they are eg rowing, fishing MF     	<p>Activity 1 - Introduction</p> <ul style="list-style-type: none"> ▪ Students are introduced to an unfolding narrative of Penrith Lakes as a place where animals, insects and humans interact. 	<p>Provided by PLEEC:</p> <ul style="list-style-type: none"> ▪ Interactive Presentation

Content	Teaching, learning and assessment	Resources
<ul style="list-style-type: none"> – discussion of why and how the spaces within places can be rearranged for different purposes eg Sydney International Regatta Centre for triathlons and School Cross Country events VR 		
<p>Stage 1 - Working Scientifically</p> <ul style="list-style-type: none"> ▪ 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)  ▪ using a range of methods to gather data and/or information, including using their senses to make observations safely and carefully, using simple tools and equipment  <p>Stage 1 - Living World</p> <ul style="list-style-type: none"> ▪ observe the different places in a local land or aquatic environment where living things can be found, eg a schoolyard, pond, beach or bush <p>Stage 1 - Features of Places</p> <ul style="list-style-type: none"> – description of the natural and human features of places STVR  	<p>Activity 2 - Nature Walk</p> <ul style="list-style-type: none"> ▪ Students are guided on an investigative walk around Penrith Lakes where they look for evidence of different animals and invertebrates. 	<p>Provided by PLEEC:</p> <ul style="list-style-type: none"> ▪ Lanyards with magnifying glass and pouch <p>Provided by visiting school:</p> <ul style="list-style-type: none"> ▪ Student hats ▪ Sunscreen ▪ First aid kit and student medications
<p>Stage 1 - Working Scientifically</p> <ul style="list-style-type: none"> ▪ 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 observations and measurements <p>Stage 1 - Living World</p> <ul style="list-style-type: none"> ▪ 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 	<p>Activity 3 - Tree Shake</p> <ul style="list-style-type: none"> ▪ Students observe terrestrial invertebrates in their natural habitat distinguishing unique features and classifying them into subgroups. 	<p>Provided by PLEEC:</p> <ul style="list-style-type: none"> ▪ Lanyards with magnifying glass and pouch ▪ White sheets ▪ Invertebrate classification tokens ▪ Token banner ▪ Specimen jars <p>Provided by visiting school:</p> <ul style="list-style-type: none"> ▪ Student hats ▪ Sunscreen ▪ First aid kit and student medications
<p>Stage 1 - Working Scientifically</p> <ul style="list-style-type: none"> ▪ 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 observations and measurements 	<p>Activity 4 - Dipnetting</p> <ul style="list-style-type: none"> ▪ Students observe aquatic invertebrates in their natural habitat distinguishing unique features and classifying them into subgroups. 	<p>Provided by PLEEC:</p> <ul style="list-style-type: none"> ▪ Freshwater ecosystem with freshwater invertebrates ▪ Dipnets ▪ Invertebrate classification tokens ▪ Specimen jars <p>Provided by visiting school:</p>

Content	Teaching, learning and assessment	Resources
<p>Stage 1 - Living World</p> <ul style="list-style-type: none"> ▪ 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 		<ul style="list-style-type: none"> ▪ Student hats ▪ Sunscreen ▪ First aid kit and student medications
<p>Stage 1 - Living World</p> <ul style="list-style-type: none"> ▪ describe how some different places in a local land or aquatic environment provide for the needs of the animals or plants that live there  ▪ describe some external features of a variety of living things, including plants and animals <p>Stage 1 - Features of Places</p> <ul style="list-style-type: none"> – description of the natural and human features of places   – consideration of how a place can be cared for eg water recreation areas    	<p>Activity 5 - Wrap-up</p> <ul style="list-style-type: none"> ▪ During the fieldwork activities, PLEEC staff will collect a variety of 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. ▪ Through an interactive puppet show, qualified teaching staff help students to identify how people's interactions with three animals' habitats (a possum, a platypus and a green tree frog) have affected their way of life. ▪ Students finalise their narrative by answering the inquiry question, "Is Penrith Lakes a good place for animals and insects to live?" 	<p>Provided by PLEEC:</p> <ul style="list-style-type: none"> ▪ Interactive Presentation ▪ SmartBoard ▪ Video microscope ▪ Terrestrial and aquatic invertebrates ▪ Puppets