



A Bug's Needs | Living World Excursion | Early Stage 1 | Science and Technology K-6

Summary	Duration
<p>This excursion addresses outcomes from the NSW Science and Technology K-6 Syllabus.</p> <p><i>Knowledge and Understanding strand - Natural Environment</i></p> <p><i>Content addressed – Needs of living things</i></p> <p>It provides opportunities for students to engage in their natural world through a range of hands-on activities, observing and questioning while learning about living things in their natural habitat.</p> <p>The teaching and learning activities provide students with the opportunities to develop improved visual and scientific literacy.</p>	<p>4 hour on-site excursion to Longneck Lagoon EEC</p> <p>Arrival time: 10 am</p> <p>Departure time: 2 pm</p> <p>Arrival and departures times are guides only. Distance and bus schedules may require modifications to the timetable.</p> <hr/> <p>About Longneck Lagoon</p> <p>Longneck Lagoon Environmental Education Centre is located in Scheyville National Park and includes a terrestrial environment (Cumberland Plain Woodland) and an aquatic environment (lagoon and creek).</p>





Outcomes	Unit overview	Key concepts
<p>Science & Technology K-6</p> <ul style="list-style-type: none"> › STe-8NE identifies the basic needs of living things. › STe-1VA shows interest in and enthusiasm for science and technology, responding to their curiosity, questions and perceived needs, wants and opportunities. › STe-2VA demonstrates a willingness to engage responsibly with local, national and global issues relevant to their lives, and to shaping sustainable futures. › STe-4WS explores their immediate surroundings by questioning, observing using their senses and communicating to share their observations and ideas. <p>English K-6</p> <ul style="list-style-type: none"> › ENe-1A communicates with peers and known adults in informal and guided activities demonstrating emerging skills of group interaction. 	<p>Students:</p> <ul style="list-style-type: none"> ▪ show an interest in science and technology by responding to questions, perceived needs and wants ▪ describe the needs of living things, and how living things depend on places in their environment to meet their needs ▪ show curiosity about the Natural Environment ▪ safely and carefully manipulate available tools, materials and equipment. 	<p>Living things have a range of needs.</p> <p>Living things grow and change.</p> <p>Living things have a range of habitats.</p>



Learning across the curriculum	Quality Teaching
<p><i>Cross-curriculum priorities enable students to develop understanding about and address the contemporary issues they face.</i></p> <p>Sustainability is concerned with the ongoing capacity of the Earth to maintain all life. It provides authentic contexts for exploring, investigating and understanding systems in the natural and made environments. Relationships, cycles and cause and effect are explored, and students develop observation and analytical skills to examine these relationships in the world around them to design solutions to identified sustainability problems.</p>	<p>Intellectual Quality</p> <p>Metalinguage - using and explaining scientific language and identifiers</p> <p>Substantive Communication - sustained and reciprocal communication throughout the lesson</p> <p>Quality Learning Environment</p> <p>Engagement - sustained interest, attentiveness and focus on the tasks at hand</p> <p>High Expectations - learning important knowledge and skills of a challenging nature</p> <p>Students' Self-Regulation - activities are purposeful and interesting resulting in low levels of interruption and high levels of initiative</p> <p>Significance</p> <p>Background Knowledge - opportunities to make connections between their knowledge and experience and the content of the lesson</p> <p>Connectedness - content has meaning beyond the classroom and the site</p>





Content	Teaching & learning activities
<p>Early Stage 1 - Living World</p> <p>Living things have basic needs, including food and water.</p> <p>Students:</p> <ul style="list-style-type: none"> ▪ describe what plants and animals, including humans, need to stay alive and healthy, eg food, water and air ▪ identify the needs of a variety of living things in a range of situations, eg pets at home, plants in the garden or plants and animals in bushland and/or on farms. <p>Early Stage 1 - Working Scientifically</p> <p>Students plan and conduct investigations by:</p> <ul style="list-style-type: none"> ▪ exploring and making observations by using their senses to gather information about objects and events in their immediate surroundings . 	<p>Following a welcome to the Centre and Acknowledgement of Country students will rotate through a series of activities designed to meet the outcomes identified above.</p> <p>The activities may vary depending on weather conditions.</p> <p>Water Bugs (approx 40 mins)</p> <p><i>Set up and demonstration</i></p> <ul style="list-style-type: none"> ▪ How to dipnet safely and transfer what they have caught. <p><i>Fun and Action in the Pond!</i></p> <ul style="list-style-type: none"> ▪ Collect as many different types of water bugs as they can. ▪ Discuss their different habitats within/around the water. <p>Water Bug Study (approx 40 mins)</p> <p><i>Set up and demonstration</i></p> <ul style="list-style-type: none"> ▪ How to use the equipment and how to look after the water bugs. <p><i>Investigation</i></p> <ul style="list-style-type: none"> ▪ Use magnifiers to observe characteristics of specimens. ▪ Learn about the needs and lifecycles of a number of different specimens using the flexi camera and smartboard.



Content	Teaching & learning activities
<p>Early Stage 1 – Speaking and viewing 1</p> <p>Develop and apply contextual knowledge</p> <ul style="list-style-type: none"> ▪ understand how to communicate effectively in pairs and groups using agreed interpersonal conventions, active listening, appropriate language and taking turns. ▪ listen to and respond orally to texts and to the communication of others in informal and structured classroom situations. ▪ contribute appropriately to class discussions. 	<p>Bush Bugs Investigation (approx 40 mins)</p> <ul style="list-style-type: none"> ▪ Habitat walk. ▪ Discuss characteristics of insects. ▪ Observe and match resin bugs to pictures. <p>Bug Making (approx 35 mins)</p> <p><i>Set up and demonstration</i></p> <ul style="list-style-type: none"> ▪ How to make a bug using the materials available and safety around glue guns. <p><i>Fun and Action!</i></p> <ul style="list-style-type: none"> ▪ Make a bug to take away using a range of craft materials. ▪ Discuss the characteristics of the bug they have made. <p><i>Unfavourable weather alternatives</i></p> <p>In the event of extremely wet or windy weather, alternate activities will be provided. These may include:</p> <ul style="list-style-type: none"> ▪ viewing bush and water bugs in resin through magnifiers ▪ a range of visual and creative art activities such as model making, leaf and bark rubbing/printing ▪ digital activities on the smartboard.



Useful links or resources

Identify an invertebrate

http://www.ento.csiro.au/education/key/couplet_01.html

Information about minibeasts

<http://www.minibeastwildlife.com.au/What%20is%20a%20minibeast.htm>

Fact sheets about different insects

http://www.bugsed.com/fact_sheets/index.html

Garden Insects

<http://tlf.dlr.det.nsw.edu.au/learningobjects/Content/L1119/object/index.html>