

# Primary Incursions

## **Introduction**

To promote inclusion and the concepts of sustainability, Numinbah Valley Environmental Education Centre (NVEEC) has made the following list of programs available as incursions to schools otherwise unable to visit the centre, on location, in Numinbah Valley. They provide a snapshot of some of the activities run at the centre, with modifications to enable their delivery at schools. The incursions are not an exhaustive list of our programs and it is highly recommended that, where possible, schools visit the environmental education centre to maximise student learning opportunities.

## **About the Centre**

NVEEC is located on the south-western edge of Hinze Dam, situated in Springbrook National Park, part of the Gold Coast hinterland. It caters for Pre-Prep to Year 12 students, from state and private schools across South-East Qld. Students come to the centre for day visits as well as 1-4 day camps. We focus on an array of Australian Curriculum areas to meet the visiting school's educational needs and to help support classroom learning goals. Our programs have specific environmental and sustainability themes embedded, which are then tailored for each visiting group. When visiting, students are guided through the 'Numinbah Way,' which showcases sustainability in action across the site and is interactively woven into centre activities.




## **Curriculum Links**

All activities are linked to one or more key learning areas of the Australian Curriculum. The focus learning intent/outcome is specified for each activity and links to the General Capabilities and Cross Curriculum Priorities are identified. We recognise that the programs have links to other curriculum areas and encourage teachers to use the activities as a platform from which to address these. However, we have chosen to only specify the learning intent which we feel have strong links and can explicitly address.




## **Further Information**

Visit the website or contact our friendly staff at:




Numinbah Valley Environmental Education Centre  
[www.numinbahvalleyeec.eq.edu.au](http://www.numinbahvalleyeec.eq.edu.au)  
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<b>Forest Walk</b>		
<p><b>Purpose:</b> Students will step outside the classroom to learn about the living things around them and gain an understanding of why places can be special to them, their community and indigenous people. Through exploration, they will recognise the importance of school gardens and local bushland as places for plants and animals to live and describe how these places can be looked after. By taking time to observe and interact with the natural areas around their school, students describe the needs of plants and animals they encounter and make connections between people and places.</p> <p><b>Key Concepts:</b> <i>Living, special place, plants, animals, needs, growth, habitat, caring for place, connection, indigenous people</i></p>		
P	1	2
<p><b>Science</b> Living things have basic needs, including food and water. (ACSSU002)</p> <p><b>HASS</b> The reasons why some places are special to people, and how they can be looked after. (ACHASSK017)</p> <p>The Aboriginal or Torres Strait Islander Country/Place on which the school is located and why Country/Place is important to Aboriginal and Torres Strait Islander Peoples. (ACHASSK016)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b> Living things live in different places where their needs are met. (ACSSU211)</p> <p><b>HASS</b> The natural, managed and constructed features of places, their location, how they change and how they can be cared for. (ACHASSK031)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b> Living things grow, change and have offspring similar to themselves. (ACSSU030)</p> <p><b>HASS</b> The ways in which Aboriginal and Torres Strait Islander Peoples maintain special connections to particular Country/Place. (ACHASSK049)</p> <p>The history of a significant person, building, site and/or part of the natural environment in the local community and what it reveals about the past. (ACHASSK044)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 






<b>Traditional Indigenous Games</b>		
<p><b>Purpose:</b> Students will develop a greater understanding and appreciation of Indigenous culture — the way it was many thousands of years ago and still is today. They will participate in, examine and investigate games and activities from different indigenous cultures across Australia, with many of these games offering insight into traditional ways of life and living. As each game is introduced, the cultural information about the traditional version of the game is shared. Play then begins using modern sporting equipment in place of traditional equipment for safety and inclusion purposes.</p> <p><b>Key Concepts:</b> <i>Indigenous, games, activity, physical, traditional language/culture, way of living, place</i></p>		
P	1	2
<p><b>Health and Physical Education</b> Participate in games with and without equipment. (ACPMP009)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> Aboriginal and Torres Strait Islander Peoples' ways of life are uniquely expressed through ways of being, knowing, thinking and doing. (OI.5)</p> <p></p>	<p><b>Health and Physical Education</b> Create and participate in games with and without equipment. (ACPMP027)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> Aboriginal and Torres Strait Islander Peoples' ways of life are uniquely expressed through ways of being, knowing, thinking and doing. (OI.5)</p> <p></p>	<p><b>Health and Physical Education</b> Create and participate in games with and without equipment. (ACPMP027)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> Aboriginal and Torres Strait Islander Peoples' ways of life are uniquely expressed through ways of being, knowing, thinking and doing. (OI.5)</p> <p></p>






<b>Creature Feature</b>		
<p><b>Purpose:</b> Students will hold and touch a variety of native animals to gain an understanding about the special wildlife we have in Australia. Through this interactive experience, they will identify the basic needs of several reptiles and recognise their similarities and differences. By taking time to observe each animal and their features, students begin to describe the places where these animals make their home in Australia and explore how they might grow and change over time. The care requirements of the reptiles are discussed and students compare this with common pets they might have at home.</p> <p><b>Key Concepts:</b> <i>Living things, physical features, basic needs, habitat, predator/prey, life cycles</i></p>		
P	1	2
<p><b>Science</b> Living things have basic needs, including food and water. (ACSSU002)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b> Living things have a variety of external features. (ACSSU017)</p> <p>Living things live in different places where their needs are met. (ACSSU211)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b> Living things grow, change and have offspring similar to themselves. (ACSSU030)</p> <p>People use science in their daily lives, including when caring for their environment and living things. (ACSHE035)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 




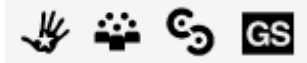


<b>Animal Artefacts</b>		
<p><b>Purpose:</b> Throughout this interactive experience, students will analyse, compare, contrast and discuss a range of animal bones and artefacts to identify their origin, as well as investigate animal <b>homes</b> and <b>adaptations</b>. Students are encouraged to hold, touch, classify and discuss their observations and predictions with peers. They will look at the effect of introduced animals to Australia, what they are doing to the natural environment and the impact domestic animals have on native animals.</p> <p><b>Key Concepts:</b> <i>Living things, classifying, physical features, basic needs, habitat, predator/prey, life cycles</i></p>		
P	1	2
<p><b>Science</b> Living things have basic needs, including food and water. (<a href="#">ACSSU002</a>)</p> <p>Science involves observing, asking questions about, and describing changes in, objects and events. (<a href="#">ACSHE013</a>)</p>	<p><b>Science</b> Living things have a variety of external features. (<a href="#">ACSSU017</a>)</p> <p>Living things live in different places where their needs are met. (<a href="#">ACSSU211</a>)</p> <p>People use science in their daily lives, including when caring for their environment and living things. (<a href="#">ACSHE022</a>)</p>	<p><b>Science</b> Living things grow, change and have offspring similar to themselves. (<a href="#">ACSSU030</a>)</p> <p>People use science in their daily lives, including when caring for their environment and living things. (<a href="#">ACSHE035</a>)</p> <p>Participate in guided investigations to explore and answer questions. (<a href="#">ACIS038</a>)</p>
<p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (<a href="#">OI.2</a>)</p> <p style="text-align: center;">  Sustainability                      Critical &amp; Creative Thinking                      Personal &amp; Social Capability                 </p>		







<b>Forest Walk</b>		
<p><b>Purpose:</b> Students will step outside the classroom to further develop their knowledge about the living things around them and gain a deeper understanding of people, places and environments in their area. Through exploration of school gardens and bushland, they will describe the importance of these places to animals and people, while recognising living and non-living things make up these places. By taking time to observe and interact with the natural areas of their school, the human influences on these environments are explored and identified, as are the life cycles of living things found there. The unique environmental conditions found in Australia are investigated and students will identify and describe the adaptations needed by living things to survive here.</p> <p><b>Key Concepts:</b> <i>Living/Non-living, places, animals, plants, environment, life cycles, management, conditions, change, growth</i></p>		
3	4	5
<p><b>Science</b> Living things can be grouped on the basis of observable features and can be distinguished from non-living things. (ACSSU044)</p> <p>Science knowledge helps people to understand the effect of their actions. (ACSHE051)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b> Living things have life cycles. (ACSSU072)</p> <p><b>HASS</b> The importance of environments, including natural vegetation, to animals and people. (ACHASSK088)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b> Living things have structural features and adaptations that help them to survive in their environment. (ACSSU043)</p> <p><b>HASS</b> The environmental and human influences on the location and characteristics of a place and the management of spaces within them. (ACHASSK113)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 







<b>Traditional Indigenous Games</b>			
<p><b>Purpose:</b> Students will develop a greater understanding and appreciation of Indigenous culture — the way it was many thousands of years ago and still is today. They will participate in, examine and investigate games and activities from different indigenous cultures across Australia, with many of these games offering insight into traditional ways of life and living. As each game is introduced, the cultural information about the traditional version of the game is shared. Play then begins using modern sporting equipment in place of traditional equipment for safety and inclusion purposes.</p> <p><b>Key Concepts:</b> <i>Indigenous, games, activity, physical, traditional language/culture, way of living, place</i></p>			
3	4	5	6
<p><b>Health and Physical Education</b> Participate in physical activities from their own and other cultures. (ACPM108)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> Aboriginal and Torres Strait Islander Peoples' ways of life are uniquely expressed through ways of being, knowing, thinking and doing. (OI.5)</p> 	<p><b>Health and Physical Education</b> Participate in physical activities from their own and other cultures. (ACPM108)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> Aboriginal and Torres Strait Islander Peoples' ways of life are uniquely expressed through ways of being, knowing, thinking and doing. (OI.5)</p> 	<p><b>Health and Physical Education</b> Participate in physical activities from their own and others' cultures, and examine how involvement creates community connections and intercultural understanding. (ACPM066)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> Aboriginal and Torres Strait Islander Peoples' ways of life are uniquely expressed through ways of being, knowing, thinking and doing. (OI.5)</p> 	<p><b>Health and Physical Education</b> Participate in physical activities from their own and others' cultures, and examine how involvement creates community connections and intercultural understanding. (ACPM066)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> Aboriginal and Torres Strait Islander Peoples' ways of life are uniquely expressed through ways of being, knowing, thinking and doing. (OI.5)</p> 









<b>Soil Life</b>			
<p><b>Purpose:</b> Students will learn about food waste, how it is typically disposed of, and ways it can be turned into a valuable resource. Through exploration of a worm farm, they identify the physical conditions of a compost environment and describe the requirements of the living things that exist there. The use of scientific equipment, like magnifying glasses and microscopes, allows students to observe, describe and identify the diverse range of organisms that call a compost environment home. The life cycle of a worm is investigated with students, as are the steps to start recycling their own waste to keep worms at home.</p> <p><b>Key Concepts:</b> <i>Waste, recycling, living things, environment, physical conditions, growth, survive, features, life cycles</i></p>			
3	4	5	6
<p><b>Science</b></p> <p>Living things can be grouped on the basis of features and can be distinguished from nonliving things. (ACSSU044)</p> <p>Science knowledge helps people to understand the effect of their actions. (ACSHE051)</p> <p>Represent and communicate observations, ideas and findings using formal and informal representations. (AC SIS060)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b></p> <p>All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b></p> <p>Living things have life cycles. (ACSSU072)</p> <p>Living things depend on each other and the environment to survive. (ACSSU073)</p> <p>Represent and communicate observations, ideas and findings using formal and informal representations. (AC SIS071)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b></p> <p>All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b></p> <p>Living things have structural features and adaptations that help them to survive in their environment. (ACSSU043)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b></p> <p>All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b></p> <p>The growth and survival of living things are affected by physical conditions of their environment. (ACSSU094)</p> <p>Changes to materials can be reversible or irreversible. (ACSSU095)</p> <p>Scientific knowledge is used to solve problems and inform personal and community decisions. (ACSHE100)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b></p> <p>All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 



<b>Creature Feature</b>			
<p><b>Purpose:</b> Students will hold and touch a variety of native animals to gain a deeper understanding about the special wildlife we have in Australia. Through this interactive experience students will identify and begin to explain different types of reptiles based on their structural features. By taking time to explore each reptile in detail, students begin to hypothesise their evolutionary history and can describe the physical conditions these reptiles need for survival in Australia’s unique environment. The life cycles of reptiles are investigated as are predator/prey relationships these reptiles have with other animals in their environment.</p> <p><b>Key Concepts:</b> <i>Living things, physical Features, reptiles, needs, habitat, predator/prey, life cycles, classification, adaptations, evolution</i></p>			
3	4	5	6
<p><b>Science</b> Living things can be grouped on the basis of observable features and can be distinguished from non-living things. (ACSSU044)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b> Living things have life cycles. (ACSSU072)</p> <p>Living things depend on each other and the environment to survive (ACSSU073)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b> Living things have structural features and adaptations that help them to survive in their environment. (ACSSU043)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 	<p><b>Science</b> The growth and survival of living things are affected by physical conditions of their environment. (ACSSU094)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b> All life forms are connected through ecosystems which they depend on for their survival. (OI.2)</p> 



<b>Freshwater Studies</b>			
<p><b>Purpose:</b> Students will explore a local creek or water sample to identify the water bugs (macroinvertebrates) living there and how they indicate water health in their catchment. The use of scientific equipment, such as magnifying glasses, microscopes and a “Magic Eye,” allows students to observe them up close and identify the diverse range of organisms that call a freshwater environment home. They record their observations, describe the structural features they see and recognise how these aid survival. Students collaboratively determine the health of the waterway, discuss human behaviours which can impact water quality and propose actions they can take maintain its health.</p> <p><b>Key Concepts:</b> <i>Water quality, freshwater environment, invertebrates, physical features, basic needs, habitat, classification</i></p>			
3	4	5	6
<p><b>Science</b></p> <p>Living things can be grouped on the basis of observable features and can be distinguished from non-living things. (ACSSU044)</p> <p>Science knowledge helps people to understand the effect of their actions. (ACSHE051)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b></p> <p>Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments. (OI.7)</p> 	<p><b>Science</b></p> <p>Living things have life cycles. (ACSSU072)</p> <p>Living things depend on each other and the environment to survive. (ACSSU073)</p> <p>Science knowledge helps people to understand the effect of their actions. (ACSHE062)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b></p> <p>Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments. (OI.7)</p> 	<p><b>Science</b></p> <p>Living things have structural features and adaptations that help them to survive in their environment. (ACSSU043)</p> <p>Scientific knowledge is used to solve problems and inform personal and community decisions. (ACSHE083)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b></p> <p>Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments. (OI.7)</p> 	<p><b>Science</b></p> <p>The growth and survival of living things are affected by physical conditions of their environment. (ACSSU094)</p> <p>Scientific knowledge is used to solve problems and inform personal and community decisions. (ACSHE100)</p> <p><b>General Capabilities &amp; Cross Curriculum Priorities</b></p> <p>Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments. (OI.7)</p> 



## Biodiversity Studies

**Purpose:** Students will look at the biodiversity of their school grounds - focussing on invertebrates. They will collect and identify invertebrates around their school gardens. Dichotomous keys are used to identify the invertebrates through observation of their unique identifying characteristics. Through exploration of the gardens around, students identify the physical conditions of an environment and describe the requirements of the living things that exist there. The use of scientific equipment, like magnifying glasses, viewers and microscopes, allows students to observe, describe and identify the diverse range of organisms that call the garden/bushland environment home. As an extension, students may use professionally collected specimens and an age appropriate dichotomous key to identify them.

**Key Concepts:** *Biodiversity, invertebrates, living things, environment, physical conditions, growth, survive, features, life cycles*

3	4	5	6
<p><b>Science</b></p> <p>Living things can be grouped on the basis of features and can be distinguished from nonliving things. (ACSSU044)</p> <p>Science knowledge helps people to understand the effect of their actions. (ACSHE051)</p> <p>Represent and communicate observations, ideas and findings using formal and informal representations. (AC SIS060)</p>	<p><b>Science</b></p> <p>Living things have life cycles. (ACSSU072)</p> <p>Living things depend on each other and the environment to survive. (ACSSU073)</p> <p>Represent and communicate observations, ideas and findings using formal and informal representations. (AC SIS071)</p>	<p><b>Science</b></p> <p>Living things have structural features and adaptations that help them to survive in their environment. (ACSSU043)</p>	<p><b>Science</b></p> <p>The growth and survival of living things are affected by physical conditions of their environment. (ACSSU094)</p> <p>Changes to materials can be reversible or irreversible. (ACSSU095)</p> <p>Scientific knowledge is used to solve problems and inform personal and community decisions. (ACSHE100)</p>

**General Capabilities & Cross Curriculum Priorities**

All life forms are connected through ecosystems which they depend on for their survival. (OI.2)



Sustainability



Personal & Social Capability



## Energy Trailer

**Purpose:** This hands-on experience will further develop students' knowledge and understanding of energy- in particular electrical energy which our modern lives all depend on. The flow of energy, how it is transferred and transformed, is explored through observation and interaction with a range of learning resources, including turbines and solar technologies. Students investigate the predominant way electrical energy is generated in Australia currently and consider the impact non-renewable energy systems have on the environment and economy. The energy trailer is an engaging starting point for students to begin to compare and contrast different renewable energies and evaluate how these could be incorporated into our energy needs in Australia.

**Key Concepts:** *Energy, electricity, transform, transfer, renewable, non-renewable, turbine, solar, coal power, environment*

6

### Science:

Changes to materials can be reversible or irreversible. ([ACSSU095](#))

Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources. ([ACSSU097](#))

Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions. ([ACSHE098](#))

Scientific knowledge is used to solve problems and inform personal and community decisions. ([ACSHE100](#))

### General Capabilities & Cross Curriculum Priorities

Designing action for sustainability requires an evaluation of past practices, the assessment of scientific and technological developments, and balanced judgements based on projected future economic, social and environmental impacts. ([OI.8](#))



## Solar Boat Challenge

**Purpose:** The Solar Boat Challenge has been designed to allow students to develop their scientific inquiry skills whilst learning about a range of science concepts. Students build a boat, testing and altering a range of variables and investigating how changing one variable at a time enables them to scientifically improve their boat design. They explore the concepts of buoyancy, hydrodynamics, electrical wiring and solar energy whilst investigating the most effective parameters. A race off at the end of the day allows an analysis of student choices, with the most scientific team having the fastest boat.

**Key Concepts:** Scientific testing, inquiry, forces, *energy, solar electricity, electrical circuits, buoyancy, hydrodynamics, propulsion*

6

### Science:

Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources. ([ACSSU097](#))

Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions. ([ACSHE098](#))

Scientific knowledge is used to solve problems and inform personal and community decisions. ([ACSHE100](#))

Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate. ([AC SIS104](#))

### General Capabilities & Cross Curriculum Priorities

Reflect on Thinking and Processes:

Level 4: Students reflect on assumptions made, consider reasonable criticism and adjust their thinking if necessary. They identify and justify the thinking behind choices they have made.



## E-Waste Technology and Innovation

**Purpose:** This interactive workshop will further develop students' knowledge and understanding of the local and global implications of managing electronic waste. They will explore how social enterprises are using technology and innovation to divert waste from landfill through extracting, recycling and repurposing valuable components from electronic devices. Students will safely use basic tools to dismantle, sort and retrieve useful electrical, metal and plastic parts from laptop computers, which will then be sent to an e-waste innovation hub to be upcycled and/or repurposed. They will critically examine technologies and explore ways to create sustainable designed solutions to reduce the environmental impacts of production and consumption.

**Key Concepts:** *Technology, innovation, production, consumption, waste, environment, sustainability*

6

### Digital Technologies:

Examine the main components of common digital systems and how they may connect together to form networks to transmit data.

(ACTDIK014)

Explain how student solutions and existing information systems are sustainable and meet current and future local community needs.

(ACTDIP021)

### Design and Technologies:

Examine how people in design and technologies occupations address competing considerations, including sustainability in the design of products, services, and environments for current and future use. (ACTDEK019)

Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions. (ACTDEP024)

### Science:

Changes to materials can be reversible or irreversible. (ACSSU095)

Scientific knowledge is used to solve problems and inform personal and community decisions. (ACSHE100)

### General Capabilities & Cross Curriculum Priorities

Designing action for sustainability requires an evaluation of past practices, the assessment of scientific and technological developments, and balanced judgements based on projected future economic, social and environmental impacts. (OI.8)

