CONNECT TO NATURE

MORETON BAY ENVIRONMENT EDUCATION CENTRES

TEACHER’S GUIDE 2020
LEARN AND EXPLORE!

Moreton Bay Regional Council’s Environment Education Centres provide hands on learning experiences for school students of all ages.

Our programs are designed so that students:

- Have fun outdoors
- Develop science enquiry skills
- Appreciate their local natural environment and encourage responsible citizen behaviour
- Learn about biodiversity, ecosystems, catchments, marine environments and more
- Experience the aesthetic opportunities in nature, e.g. art or writing activities

All centres cater for Prep - Year 12, with half day and full day excursions available. Bookings are preferred **Tuesdays - Thursdays**; however, we may facilitate dates that work with your timetable.

Modules are delivered free of charge, excluding Wild about Wildlife and Insect World (schools are invoiced **prior to program** in line with the presenter's fee).

Education programs are delivered by council officers and trained volunteers and allow your students to engage with lesson activities linked to the Australian National Curriculum.

**WHAT TO BRING**

Our centres are based around engaging with the natural environment. We suggest students come prepared with insect repellent, hats, lunch, water bottles and sunscreen along with their books and pencils.
YOUR VISIT

Our centres are designed to encourage visitors to explore our bushland or wetland areas, engage with our interactive displays and develop an appreciation for the natural environment.

The student-centred modules are delivered by experienced education officers and dedicated volunteers incorporating methods such as role play, interactive activities, art and nature walks. Each centre is equipped with all required resources and equipment including binoculars, telescopes, microscopes and art supplies. Please also ask us about our accompanying worksheets.

Select up to four modules for your excursion or talk to our friendly centre staff about a customised or teacher directed visit. The natural environments create perfect sites to run biology practical lessons or even art/photography classes. All centres are equipped with toilets, picnic and undercover areas, along with playgrounds at CREEC and Kumbartcho.

HOW TO BOOK

Bookings are required and preferred Tuesdays - Thursdays. Please email the following information through to esmailbox@moretonbay.qld.gov.au. For any questions, please refer to the contact numbers below.

1. Preferred centre
2. School name
3. Contact name, phone number and e-mail
4. Three preferred date options
5. Year level and number of students (maximum 100 per day)
6. Unit progress (how long have students been learning about this unit)
7. List up to four modules you would like included in your visit.

A member of the team will be able to assist you in selecting the most appropriate modules to meet your needs and desired learning outcome.
ENVIRONMENT EDUCATION CENTRES

Osprey House Environment Centre
975 Dohles Rocks Road, Griffin
PH: 3886 4463
Mangroves, shorebirds, ospreys and dugongs feature at this centre nestled on the foreshore of Hays Inlet.

Kumbartcho Sanctuary
15 Bunya Pine Court, Eatons Hill
PH: 0417 627 309
Rainforest river trails and habitat on the banks of the South Pine River.

CREEC
Caboolture Region Environment Education Centre
150 Rowley Rd, Burpengary
PH: 3888 8751
Rare lowland creek rainforest along the Burpengary Creek.

Redcliffe Botanic Gardens
20 Henzell St, Redcliffe
c/o 5433 2379
Gardens filled with local native plants, wildlife and pathways through habitat samples, with a focus on botanic research.
*Limited facilitated programs available, please ask.*

For more information on our environment centres and to view their individual brochures, please visit our website: [https://www.moretonbay.qld.gov.au/Services/Environment/Environment-Centres](https://www.moretonbay.qld.gov.au/Services/Environment/Environment-Centres)
Our student-centred and engaging modules link to the Australian Curriculum, incorporating the general capabilities and cross curriculum priorities. These programs utilise outdoor curriculum connections to develop science inquiry skills and science as a human endeavour understanding. Please refer to the following program outlines for curriculum descriptor links.

**GENERAL CAPABILITIES**

- Literacy
- Numeracy
- Critical and creative thinking
- Personal and social capability
- Ethical understanding
- Intercultural understanding

**CROSS CURRICULUM PRIORITIES**

- Sustainability
- Aboriginal & Torres Strait Islander histories and cultures

**SCIENCE INQUIRY SKILLS**

- Questioning and predicting
- Planning and conducting
- Processing and analysing data and information
- Communicating
- Evaluating
**MODULE GUIDE**

*Modules are adapted to suit a range of ages. Alternatively, talk to our staff about customised or teacher directed visits. All modules are delivered free of charge except for Animal Demonstrations. Please ask for Redcliffe Botanical Gardens program availability.*

<table>
<thead>
<tr>
<th>GENERAL THEME</th>
<th>PROGRAM TITLE</th>
<th>*YEAR LEVEL</th>
<th>DESCRIPTION</th>
<th>CENTRE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INDIGENOUS CULTURE</strong></td>
<td>Yali Moyum</td>
<td>P - 6</td>
<td>Investigate how local Aboriginal communities used their surroundings to eat, hunt and make shelter (using embossed plaques along boardwalk).</td>
<td>Osprey House</td>
</tr>
<tr>
<td><strong>CONNECT TO NATURE</strong></td>
<td>Explore an Environment Centre</td>
<td>P - 12</td>
<td>Self-guided experience; utilise displays and surrounding grounds to support your unit of work or focus topic.</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Nature Walk</td>
<td>P - 12</td>
<td>Tailored to your topic - explore difference habitats and ecosystems around the environment centre, identifying plant and animal species.</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Bird Watching and Identification</td>
<td>P - 12</td>
<td>A guided bird watch linking to your chosen topic (i.e. adaptations or endangered species).</td>
<td>All</td>
</tr>
<tr>
<td><strong>HABITATS AND BIODIVERSITY</strong></td>
<td>Living Mangroves: Web of Life</td>
<td>P - 12</td>
<td>Discover the importance of the mangrove ecosystem and what lives amongst the trees and mud.</td>
<td>Osprey House</td>
</tr>
<tr>
<td></td>
<td>Endangered Species</td>
<td>3 - 9</td>
<td>Identify and address issues pushing priority species such as Koalas, lesser swamp orchids or the Richmond Birdwing Butterfly towards local extinction.</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Threats to Our Oceans</td>
<td>P - 3</td>
<td>Create a recycled 3D artwork showcasing the threats impacting our marine wildlife.</td>
<td>Osprey House</td>
</tr>
<tr>
<td></td>
<td>Where Have the Dugongs Gone?</td>
<td>1 - 7</td>
<td>A life-sized dugong model helps explain the marvels of this marine mammal and the dangers facing dugong populations in our waterways.</td>
<td>Osprey House</td>
</tr>
<tr>
<td></td>
<td>Native Plants</td>
<td>P - 9</td>
<td>Explore differences between natives and exotic plants to discover why native plants are the preferred species to grow in Australian gardens. Tour the onsite nursery at CREEC/Kumbartcho.</td>
<td>All</td>
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# Education for sustainability

<table>
<thead>
<tr>
<th>GENERAL THEME</th>
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</thead>
<tbody>
<tr>
<td><strong>SUSTAINABILITY</strong></td>
<td>Sustainability Tour</td>
<td>4 - 12</td>
<td>A guided tour identifying sustainable strategies used at the centre and the benefits to individuals and the region.</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Renewable Energy</td>
<td>4 - 12</td>
<td>Hands-on alternative energy models and sustainable technology are used to investigate the difference between renewable and non-renewable energy.</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Reduce, Reuse, Recycle</td>
<td>P - 9</td>
<td>Learn the wonders of waste and how to identify various items which can be avoided, reused, recycled, composted or disposed of appropriately.</td>
<td>All</td>
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<tr>
<td></td>
<td>Worm Farms and Composting</td>
<td>P - 7</td>
<td>Engage in an interactive story of composting and worm farming, discovering how food waste can become a resource for the garden.</td>
<td>All</td>
</tr>
<tr>
<td><strong>WATER IN THE ENVIRONMENT</strong></td>
<td>Urban Water Cycle &amp; Water Saving</td>
<td>2 - 10</td>
<td>Discuss water saving practices and trace the water cycle and the urban water cycle in this interactive presentation.</td>
<td>All</td>
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<tr>
<td></td>
<td>Catchment Story and Water Pollution</td>
<td>P - 7</td>
<td>A dramatic and fun demonstration and discussion on the impact and prevention of pollution in our local waterways.</td>
<td>All</td>
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<tr>
<td></td>
<td>Erosion</td>
<td>4 - 10</td>
<td>Observe the local creek and discover ways to combat one of the biggest threats to our waterways: erosion.</td>
<td>Kumbartcho &amp; CREEC</td>
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<tr>
<td></td>
<td>Healthy Streams and Creeks</td>
<td>2 - 10</td>
<td>Observe healthy vegetation, rate our stream habitat and discover hidden wildlife in local water samples</td>
<td>Kumbartcho &amp; CREEC</td>
</tr>
<tr>
<td><strong>ANIMAL DEMONSTRATIONS</strong></td>
<td>Insect World - Bugs Ed Nature Show</td>
<td>P - 10</td>
<td>Learn about the fascinating hidden world of insects and mini-beasts through specimens from around the world and live Australian creepy crawlies.</td>
<td>All</td>
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<td></td>
<td>Wild about Wildlife - Geckoes Wildlife</td>
<td>P - 10</td>
<td>Stimulate the senses with a close-up and tactile encounter, providing the opportunity to touch a variety of live native animals</td>
<td>All</td>
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# EXAMPLE TIMETABLE

*Education centre staff will assist you with your timetable. It is recommended that you select three modules and use one session per group as reflection/review time.*

<table>
<thead>
<tr>
<th>Time</th>
<th>Group A (~25 students)</th>
<th>Group B (~25 students)</th>
<th>Group C (~25 students)</th>
<th>Group D (~25 students)</th>
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</thead>
<tbody>
<tr>
<td>9.30am</td>
<td>Welcome</td>
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<tr>
<td>9.40am</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>10.25am</td>
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<tr>
<td>11.10am</td>
<td><strong>Morning tea</strong> (30 mins)</td>
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<tr>
<td>11.40am</td>
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<tr>
<td>12.20pm</td>
<td><strong>Lunch</strong> (30 mins)</td>
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<td></td>
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<tr>
<td>1.30pm</td>
<td></td>
<td></td>
<td></td>
<td>Departure</td>
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</tbody>
</table>
“Yali Moyum”
Aboriginal Art Walk
Interpretive rubbing plaques

OBJECTIVES
- increase understanding of the interaction between Aboriginal people and the environment
- provide the opportunity for a hands-on, creative response to Indigenous culture
- provide an aesthetic/artistic connection to the environment and Indigenous culture

LEARNING EXPERIENCES
1. Discuss the importance of mangrove and wetland habitat to Indigenous people as an everyday resource for food and shelter.
2. Examine bush tucker plants.
3. Utilise boardwalk Indigenous designs plaques (optional)
   a. Create a rubbing from along the mangrove boardwalk.
   b. Provide the descriptive interpretation of each of the rubbing plaques.
   c. A creative writing module or a freestyle art experience.

Note: A series of 20 Indigenous artworks at the CREEC Environment Centre, which describing Burpengary Creek could be utilised for a similar experience.

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<thead>
<tr>
<th>YEAR</th>
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<tbody>
<tr>
<td>P - 12</td>
<td>Aboriginal &amp; Torres Strait Islander histories and cultures</td>
</tr>
<tr>
<td>P - 5</td>
<td>Humanities and Social Science - HASS (ACHASSK013, ACHASSK017, ACHASSI019, ACHASSK045, ACHASSK062, ACHASSK083, ACHASSK089, ACHASSK112)</td>
</tr>
</tbody>
</table>
Explore an Environment Centre (Self-Guided)

OBJECTIVES

- interact with the displays in the Centre
- experience the outdoor environment
- identify and appreciate local features, animals and plants in the habitat of each Centre

LEARNING EXPERIENCES

1. Explore the environment centre.
   a. Use the interpretive displays to formulate and answer questions.
   b. Draw or describe features of the centre.
   c. Interact with the touch and tell table displays and see a working worm farm.
2. Gain an understanding of relationships and systems in the natural environment.

<table>
<thead>
<tr>
<th>YEAR</th>
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</table>
| P - 12 | Science - Biological Sciences  
(Adapt for your own focus topic) |
| P - 12 | Humanities and Social Science - HASS & Geography  
(Adapt for your own focus topic) |
Nature Walk

OBJECTIVES
- observe and describe habitats
- predict and identify what species (plant and animal) live in the natural surrounding habitats
- understand what makes up an ‘ecosystem’
- identify ecosystems related to plant communities e.g. mangroves/wetlands

LEARNING EXPERIENCES
1. Select your chosen focus topic (i.e. Endangered species, human impact, habitats, life cycles, living things, etc.)
2. Explore the boardwalks and nature paths of the Centre.
3. Observe and name Centre ecosystems (approx. 1-3 ecosystems at each Centre).
4. Identify plant species in each ecosystem and the adaptations that assist them to survive.
5. Identify native animals which rely on the ecosystem for food and shelter.
6. Discuss the impacts to and significance of the natural environment.

YEAR | CURRICULUM LINKS
--- | ---
P - 9 | Science - Biological Sciences  
(ACSSU002, ACSSU017, ACSSU211, ACSSU030, ACSSU044, ACSSU073, ACSSU043, ACSSU094, ACSSU112, ACSSU176)
1 - 7 | Humanities and Social Science - HASS  
(ACHASSK031, ACHASSK088, ACHASSK183)
8 - 9 | Humanities and Social Science - Geography  
(ACHGK051, ACHGK065, ACHGK069)
Senior | Biology - Biodiversity and the interconnectedness of life
Senior | Earth and Environmental Science
Bird Watching and Identification

OBJECTIVES

- use centre supplied binoculars and telescopes for fieldwork
- observe and identify wetland (Osprey) or forest (CREEC & Kumbartcho) birds
- collect, sort and analyse data or observations

LEARNING EXPERIENCES

1. Walk to various bird hides, intro to typical birds in the habitat, refer to local bird chart.
2. Data sheets for individual observations are explained.
3. Observe using a range of methods: naked eye, binoculars, telescope, listening for bird calls.
4. Record observations on data sheets.
5. Small group discussion of observations - features observed (e.g. beak shape); sort data into characteristics of types of birds.
6. Discussion and analysis of how particular features assist the bird's activities and how behaviours such as migration assist survival.

YEAR CURRICULUM LINKS

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<tbody>
<tr>
<td>P - 6</td>
<td>Science - Biological Sciences (ACSSU002, ACSSU017, ACSSU211, ACSSU043, ACSSU094)</td>
</tr>
</tbody>
</table>
Living Mangroves: Web of Life

OBJECTIVES

- develop an awareness of mangroves as an important ecosystem, a web of life
- observe the mangrove community
  - identifying fish habitat areas
  - considering interactions between fauna and flora species
  - evaluate adaptations of living things to suit the habitat

LEARNING EXPERIENCES

1. Students use all senses to observe, experience and consider:
   a. What is a wetland?
   b. What is a mangrove?
   c. What adaptations do mangroves have?
   d. What impacts on biodiversity result from human actions?

2. Students walk along the boardwalk:
   a. Identify types of mangroves and fauna species.
   b. Understand the interactions at all levels of our diverse environment.

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<tr>
<td>P - 7</td>
<td>Science - Biological Sciences (ACSSU002, ACSSU017, ACSSU211, ACSSU073, ACSSU043, ACSSU094, ACSSU112)</td>
</tr>
<tr>
<td>Senior</td>
<td>Biology - Biodiversity and the interconnectedness of life</td>
</tr>
</tbody>
</table>
Endangered Species

OBJECTIVES

- identify local endangered fauna and flora species
- understand the threats impacting these species
- identify ways to make a difference to the survival of species

LEARNING EXPERIENCES

1. Define the terms 'endangered' and 'threatened' species.
2. List endangered or threatened local fauna and flora species.
3. Investigate why these species are vulnerable in this region.
4. Discuss and identify changes that we can all make to help protect these species.

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<tr>
<td>6 - 7</td>
<td>Science - Biological Sciences (ACSSU094, ACSSU112)</td>
</tr>
<tr>
<td>3 - 5</td>
<td>Humanities and Social Science - HASS (ACHASSI082, ACHASSI061, ACHASSI081, ACHASSI101)</td>
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</tbody>
</table>
Threats to Our Oceans

OBJECTIVES

- understand the threats which face local marine life
- create a 3D artwork from recycled materials

LEARNING EXPERIENCES

1. Discuss impacting factors on ocean health, e.g. pollution.
2. Identify ways to make positive changes to improve marine health and reduce pollution.
3. Engage with interactive centre displays.
4. Create a 3D mural or individual artwork using recycled materials, to respond to the issue.

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<tbody>
<tr>
<td>6</td>
<td>Science - Biological Sciences (ACSSU094)</td>
</tr>
<tr>
<td>4 - 5</td>
<td>Humanities and Social Science - HASS (ACHASSI082, ACHASSI081, ACHASSI101)</td>
</tr>
</tbody>
</table>
Where Have the Dugongs Gone?

OBJECTIVES

- stimulate interest and awareness of dugongs, a vulnerable, local marine mammal
- raise awareness of the impact of human actions on dugongs and their habitat

LEARNING EXPERIENCES

1. Engage with the life-sized centre display dugong.
2. Identify physical characteristics and adaptations that enable dugongs to live in Moreton Bay.
3. Discuss why the dugong is listed as vulnerable and consider why their numbers are declining.
4. Develop an understanding of the actions to be taken to reduce our impacts on marine life.

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<tbody>
<tr>
<td>1 - 6</td>
<td>Science - Biological Sciences (ACSSU017, ACSSU211, ACSSU043, ACSSU094)</td>
</tr>
<tr>
<td>4 - 5</td>
<td>Humanities and Social Science - HASS (ACHASSI082, ACHASSI081, ACHASSI101)</td>
</tr>
</tbody>
</table>
Native Plants

OBJECTIVES

- appreciate the importance of native plants in our natural environment
- understand the processes involved in the propagation of native plants
- understand that loss of vegetation affects habitat which affects native animals
- bring home a potted native plant

LEARNING EXPERIENCES

1. Discuss the plants students see around them in their local community, e.g. parks, reserves, school grounds, backyards, street planting.
2. Develop and understanding of ‘what is a native plant’;
   a. Compare the benefits and negatives between native to exotic species
3. (CREEC and Kumbartcho) Tour through the native onsite nursery, highlighting how each section relates to the propagation processes and why new plants must pass through each section to survive.
4. Learn about the propagation process (e.g. seed collection, preparation, sowing and prickling out) linking to plant life cycles.
5. Individuals (or pairs) pot a native plant to take back to home or school.
6. Guided walk through the bushland identifying native plant species and gain an understanding of their importance to biodiversity.

YEAR | CURRICULUM LINKS
--- | ---
1 - 6 | Science - Biological Sciences (ACSSU017, ACSSU094)
4 - 5 | Humanities and Social Science - HASS (ACHASSI081, ACHASSI101)
Sustainability Tour

Each Centre has sustainability initiatives in place, including a focus on energy and water efficiency as well as a reducing impact, managing waste and valuing biodiversity. However, CREEC is the primary location for sustainability initiatives.

OBJECTIVES

- identify and understand different sustainability actions
- evaluate sustainability strategies for different types of buildings, e.g. at home and at school

LEARNING EXPERIENCES

1. Tour the Centre observing and documenting different sustainability strategies (i.e. reduced water, energy and material consumption).
2. Identify waste management and recycling strategies.
3. Discuss alternative ways the Centre demonstrates sustainable actions (e.g. by enhancing habitat and encouraging biodiversity).
4. Analyse successes, barriers and issues for different sustainability actions.
5. Apply critical thinking and identify opportunities for improvement both at the centre or back at school.

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<tbody>
<tr>
<td>P - 12</td>
<td>Sustainability</td>
</tr>
<tr>
<td>7</td>
<td>Humanities and Social Science - Geography (ACHGK037)</td>
</tr>
<tr>
<td>Senior</td>
<td>Earth and Environmental Science - Unit 3</td>
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</tbody>
</table>
Renewable Energy

OBJECTIVES
- understand the difference between renewable and non-renewable energy
- categorise energy sources
- understand the benefits of renewable energy

LEARNING EXPERIENCES
1. Discuss and define 'renewable' and 'non-renewable' energy.
2. Identify and sort energy sources into either category.
3. Use interactive display models to develop understanding.
4. Identify the benefits or limitation of each type of energy.
5. Identify ways to be energy efficient.
6. Brainstorm possible renewable energy resources and future energy technologies.

YEAR | CURRICULUM LINKS
--- | ---
P -12 | Sustainability
7 | Humanities and Social Science - HASS & Geography (ACHASSK182, ACHGK037)
Senior | Earth and Environmental Science - Unit 3
Reduce, Reuse, Recycle

OBJECTIVES

- gain an understanding of the importance of reduced waste and recycling
- develop an understanding of recyclable items and how items can be recycled
- identify opportunities to reduce personal impact on amount of waste produced

LEARNING EXPERIENCES

1. Discuss the impact of waste on the environment.
2. Engage in an interactive activity to sort/identify rubbish as recyclable or other.
3. Students assess and record different types of garbage found at home/school/centre.
4. Discussion and answer the following questions:
   a. What can be done with waste aside from binning it?
   b. How can food waste be re-used? e.g. composting or worm farms.
   c. How can we recycle in our local area? e.g. yellow bins, recycle shops, e-waste.
   d. If we recycle efficiently, how much waste should there be at the end of a week?
   e. What are new initiatives to reduce waste, how can we implement these in our daily life? (i.e. wax wrappers, metal straws, etc.)

YEAR | CURRICULUM LINKS
--- | ---
1 - 5 | Humanities and Social Science - HASS (ACHASSK033, ACHASSI082, ACHASSI081, ACHASSI101)
P - 2 | Design and Technologies (ACTDEP005)
Worm Farms and Composting

OBJECTIVES
- learn how food waste can become a resource
- connect food waste re-use to good gardening practices
- introduce students to good gardening practices

LEARNING EXPERIENCES
1. Student pose questions around avoiding waste, recycling and re-using food waste.
2. Students use ‘waste’ items to identify whether each is suitable for composting, recycling or in a worm farm.
3. Students engage with the live worm farm demonstration.
4. Discussion on how else we can reuse food scraps and paper.
5. Students learn how a worm farm can be helpful for a garden.

YEAR | CURRICULUM LINKS
--- | ---
1 - 5 | Humanities and Social Science - HASS (ACHASSK033, ACHASSI081)
Urban Water Cycle and Water Saving

OBJECTIVES

- develop an understanding of water as a limited resource
- compare the water cycle and the urban water cycle
- learn water saving practices and evaluate their effectiveness

LEARNING EXPERIENCES

1. Through discussion and presentation learn where water comes from - the water cycle.
2. Discuss how we use water and what would happen if we didn’t have water.
3. Describe the urban water cycle - identify how humans interrupt the cycle to supply communities. Investigate how water is used, treated and returned to the natural cycle.
4. Discuss how we can change our behaviours and devices to conserve water.

YEAR | CURRICULUM LINKS
--- | ---
7 | Humanities and Social Science - Geography (ACHGK038)
Catchment Story and Water Pollution

OBJECTIVES

- describe a water catchment and its importance
- identify sources of catchment pollution
- propose ways to improve catchment health
- understand that waterways are part of an overall system

LEARNING EXPERIENCES

1. Through a narrative presentation hear the 'Story of a Catchment'.
2. Students engage with a role in the story and represent a source of catchment pollution.
   a. Students observe visual effects of pollution in a large clear water container.
3. Summarise and evaluate the effects of land uses and human impacts on catchment health.
4. Students discuss ways they can help improve the health of a catchment.
5. Presenter outlines how catchments are managed to ensure they are kept healthy.

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</table>
| 1 - 6 | Science - Biological Sciences  
(ACSSU211, ACSSU094) |
Erosion

OBJECTIVES

- develop an understanding of the different causes of erosion
- identify types of erosion in the landscape
- understand the importance of native plants in the natural environment

LEARNING EXPERIENCES

1. Define the term and process of erosion.
2. Students identify different types of erosion and the natural forces which cause erosion.
3. Utilise an interactive activity highlighting the actions of people which damage riparian zones.
4. Observe and analyse examples of erosion on a guided walk through natural habitat (Burpengary Creek or South Pine River).
5. Students develop and discuss solutions to prevent both natural and man-made erosion.

Science knowledge helps people to understand the effect of their actions (ACSHE062)
Earth’s surface changes over time as a result of natural processes and human activity (ACSSU075)

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<tr>
<td>4 - 6</td>
<td>Science - Biological Sciences &amp; Earth (ACSSU094, ACSHE062, ACSSU075)</td>
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<td>8</td>
<td>Humanities and Social Science - Geography (ACHGK051)</td>
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Healthy Streams and Creeks
(Macro invertebrates)

OBJECTIVES

- develop science skills with water testing and observation of macro-invertebrates
- observe and record the presence of macro-invertebrates in water samples
- evaluate stream health based on analysis of macro-invertebrate data
- understand health factors and threats to waterway habitats

LEARNING EXPERIENCES

1. Discuss the Habitat Record for the creek, identifying health factors such as:
   - bank vegetation and verge vegetation
   - in stream cover
   - bank erosion and stability
   - riffles, pools and bends
2. Assess water samples from the river/creek at the Centre.
3. Identify macro-invertebrates present in the sample.
4. Rate the water quality in the river.
5. Through a guided walk become familiar with a riparian rainforest habitat, discussing impacts on river/habitat health.

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<tr>
<td>4 - 7</td>
<td>Science - Biological Sciences (ACSSU073, ACSSU094, ACSSU112)</td>
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</table>
Insect World - Bugs Ed nature show

COST:
$6 per student. Minimum group sizes apply. (Price valid till June 30th, 2020)

TOPICS
This module is facilitated by Bugs Ed and includes animal interactions. Please select a topic;

- Amazing ants
- Friends or foes
- Predators and prey
- Secrets to success
- Insect lifecycles
- Endangered insects
- Days of our hives

OBJECTIVES
- learn about the fascinating hidden world of insects and minibeasts
- examine specimens of insects, spiders and other creepy crawlies from around the world
- get up close and personal with live Australian insects, e.g. giant stick insect, praying mantis

LEARNING EXPERIENCES
1. Presenter outlines the insect focus topic selected by the school.
2. Presenter explains insect diversity and highlights their role in habitats and food webs.
3. Discuss differing life cycles, adaptations and threats.
4. Students study samples of insects during session.

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</table>
Wild about Wildlife - Geckoes Wildlife Show

COST:
$6 per student. Minimum group sizes apply. (Price valid till June 30th, 2020)

TOPICS
This module is facilitated by Geckoes Wildlife and includes animal interactions. Please select a topic;

- Wildlife encounter (e.g. possums, lizards, snakes)
- Frogs
- Flying foxes
- Animal classification
- Adaptations

OBJECTIVES
- stimulate children’s senses with a close-up and tactile encounter
- learn about native animals
- appreciate native animals and therefore value their habitat

LEARNING EXPERIENCES

1. Presentation of the content in the focus topic selected by the school.
2. Hands on experience with native animals.
   a. Explain the diversity of local wildlife and highlight their importance to our natural environment.
   b. Discuss and describe topics such as biodiversity, life cycles, habitats and wildlife/urban interactions.

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