



**PORTLAND
ALUMINIUM**

Partnering Stronger Communities

on the right track

Portland Aluminium Environmental Education



on the right track

Helping you protect our environment



UNIT SUMMARY

This unit of work focuses on students investigating objects, exploring their surroundings & problem solving. It will encourage students to think about the impact humans have on the environment and some positive solutions. The proposed activity sequence incorporates elements of an interactive approach to teaching, whereby students use their prior knowledge, explore topics, pose their own questions and report their findings. This unit can be linked to other units within the 'Environmental Education in the South West Resource Kit'.

LEARNING OBJECTIVES / FOCUS AREAS

Students will be able to:

- Identify factors that influence the natural balance of an environment.
- Understand the diversity of issues concerning natural and human environments.
- Use their problem solving skills to make their way around the trail.

RESOURCES ATTACHED

- Suggested Teaching Sequence
- Clue Card & Map
- Activity Sheet (Trail Blazing)

SPECIALIST MATERIAL

- www.gould.edu.com.au
- Arbour Week Activities Book 1,2 & 3, Victorian Schools' Nursery (Min. of Ed)
- Activities, In, For and About the Environment, Gould League.
- Making Trails (Survival Special), Gould League.
- Trail Blazing Educational Booklet, Portland Aluminium.

LEARNING OUTCOMES

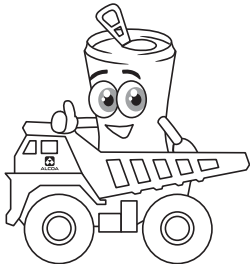
Relevant outcomes from the Victorian Essential Learning Standards:

SCIENCE: Life and Living - Level 3-5

- Describe events, including human activities, that affect the balance of numbers in an ecosystem

SOSE: Place and Space – Level 4 & 5

- Describe responses of different elements to changes in natural systems.
- Using a range of materials, distinguishes similarities and differences between places and accounts for the factors that may shape their features.



TEACHING SEQUENCE OUTLINES

Pre-visit (~1 lesson)

- Discuss what trails are, how they are made, and how they can be used.
- Have students discuss and record what they think needs to be considered in developing a trail.
- Discuss the positive & negative influences a trail can have on the environment.

The Visit (1/2 Day at Portland Aluminium Wetlands)

- Using clue cards and maps, students will complete Portland Aluminium's Nature Trail and solve the environmental puzzle.

Post Visit (~3 lessons)

- Students prepare and present their findings to the class.
- Design a theme trail in their school ground
- Prepare a trail booklet/plan/map for visitors.

Further Study Suggestions:

- Refer to other units represented in the 'Environmental Education in the South West Resource Kit'.

ACTIVITY INFORMATION

During the visit to Portland Aluminium's education centre, students will be:

- Briefed on safety
- Given a background talk about Portland Aluminium's 'Smelter in the Park'
- Divided into small groups of 4-5
- Allocated a station to begin their Trail Blazing activity
- Discussing, discovering and sharing information about their findings
- Completing the activity sheet relevant to their year level
- Solving the Environmental Puzzle by completing the Nature Trail

MATERIALS

School

- Clipboards, pencils, appropriate clothing & weather protection.

Portland Aluminium

- Guide, activity sheet, map, and clue cards.

BACKGROUND INFORMATION

Station 1. Wetland Wonders (Exploring a wetland habitat)

- Look on the Pond life chart. Name 4 things (in order) to form a food chain.
- Count the different wetland plants you can see (In & Out)

Station 2. Hop to it (Exploring a frog friendly habitat)

- Search around the frog pond. Can you find a frog? If not, can you hear any?
- List some elements that make the area suitable for frogs.

Station 3. Birds, Beaks & Bases (Discovering the world of birds)

- Count how many different birds you can see from the bird hide.
- Using the Wetland Bird Chart, how many different beaks shapes can you count?

Station 4. Coming to Our Senses (Using our 5 senses)

- Find (Something with a rough texture)
- Find (A bush tucker plant)
- Find (Evidence of insect damage)
- Describe (The sounds around you)
- Describe (A scented plant)

Station 5. The Changing Environment (Environmentally friendly farming)

- Sketch and label the view of the farm (Wildlife corridors, timber plantations, cows, vermin)
- List of positives & negatives

Station 6. Tree-mendous (The role of Trees)

- Take a Leaf Rubbing from 3 different plants.
- Find the tree with the large cone shaped flowers... (Silver Banksia)
- Find the shrub with the common name Hop Bush. (Dodonea viscosa)
- How many different seed capsules can you find on the ground?

Station 7. Creature Connection (creature, habitat interaction)

- Draw any animal tracks found in the sand pads
- List evidence of animals in the area

Station 8. Mini-Beasts (The world of insects, spiders and other crawlies)

- Box buried in ground (Complete the recyclers chain by using the pictures in the box).
- Draw the mini-beasts in its home.

Station 9. Endangered Species (Who, What and Why)

- Island (Corridor connections – habitat fragmentation)
- Spot the intruders

Station 10. Leaf it To Us (Plant propagation & Revegetation)

- Look in the glasshouse. What makes this environment special for plant growth?
- List the 4 main ingredients plants need to grow.

Environmental Puzzle.

- Birds, frogs, wetland
- Changing, creatures, endangered
- Mini-beasts, leaf, tree
- Coming

TRAIL BLAZING

Activity Sheet 1

Complete the activities and follow the clues.

STATION 1 - WETLAND WONDERS

Using the Pondlife Chart, create a foodchain

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Count the different plants you can see in and around the wetland _____

STATION 2 - FROG FRIENDLY HABITAT

Can you hear any frogs? How many different calls? _____

List 4 things you can see that make this area frog friendly.

_____	_____
_____	_____

STATION 3 - BIRD, BEAKS & BASES

How many different birds can you see from the bird hide? _____

From the Wetland Bird Chart Draw 3 different beak shapes:

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STATION 4 - COMING TO OUR SENSES

TOUCH

Find something with a rough texture.
Use 2 words to describe how it feels.

TASTE

Has the pigface produced any fruit?
If so, what does it taste like?

SOUND

Describe some of the sounds around you ...

SIGHT

Check out the leaf litter. Find and draw evidence of insect damage.



SMELL

Describe the smell of a scented plant in the planter boxes.

STATION 5 - CHANGING ENVIRONMENTS

Sketch and label the view of the farm. (Include wildlife corridors, timber plantations, cows, wildlife, etc.)

STATION 6 - TREE-MENDOUS

Take a leaf rubbing from 3 different plants

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Find the tree with the large cone shaped flowers.

What is its common name? _____

How many different seed capsules can you find on the ground? _____

Find the Hop Bush.

What is its botanical name? _____

STATION 7 - CREATURE CONNECTIONS

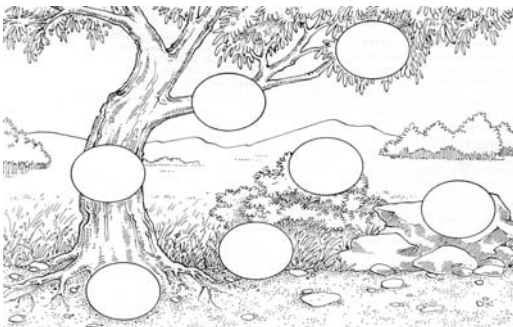
Draw any evidence of animals found along the track.

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STATION 8 - MINI-BEASTS

Look in the box. Using the picture cards, find and list 3 of nature's recyclers.

Find, then draw the mini-beasts in their homes.



STATION 9 - ENDANGERED SPECIES

Walk across the bridge and onto the island. How could you get to the island if the bridge wasn't there? Imagine you are a Koala and your habitat is being destroyed. The only gum trees left are out on the island.

What can we do to prevent this sort of thing from happening?

How many intruders can you spot between the island and the next seating area?



STATION 10 - LEAF IT TO US

Look in the glasshouse. What 3 things make the environment inside special?

List 4 ingredients plants need to grow _____

ENVIRONMENTAL PUZZLE

Use the first word from each station to complete the 4 sentences below:

1. _____ & _____ live in and around a _____.
2. _____ the environment can put many _____ on the _____ list.
3. Some _____ live in the _____ litter on the forest floor, while many others live under the bark of a _____.
4. Thank-you for _____ a Portland Aluminium's 'Smelter in the Park' education centre.

**Hope you learnt some valuable lessons about
caring for our environment.**