Early Primary: Level 1 2 3 4 5 6

Hideaway spaces, special places: Elements of the environment

Strand

Time, Continuity and Change Place and Space

Core learning outcomes

Time, Continuity and Change	TCC 1.4	Students describe effects of a change over time in a familiar environment.
Place and Space	PS 1.1	Students match relationships between environmental conditions and people's clothes, food, shelter, work and leisure.
	PS 1.2	Students make connections between elements of simple ecosystems.
	PS 1.4	Students organise and present information about places that are important to them.

Purpose and overview

Activities in this module assist students to find out about and investigate connections between elements within simple ecosystems.

Students begin to consider the relationship between environmental conditions and human needs. Through discussion about and interaction with a range of resources, students reflect on and discuss the importance of different environments in relation to the survival of living things and explore how and why these environments change over time.

Students organise and present information about places that are important to them and consider why they have such personal significance.



Phases	Activities	Core learning outcomes	Assessment opportunities
1. Finding out about environments and change	 Different places Pack your bags The order of things 	TCC 1.4 PS 1.1	Observation: Use the observation checklist (Resource 1) to collect evidence of demonstrations of TCC 1.4 (Activities 3 and 4) and PS 1.1 (Activities 1 and 2).Environmental match: Students match cards showing environmental conditions with relevant clothing, food, shelter, work and leisure as evidence of demonstrations of PS 1.1 (Activity 2).Descriptions: Students describe the effects of a change over time
			in a familiar environment by ordering objects as evidence of demonstrations of TCC 1.4 (Activity 3).
2. Investigating elements within simple ecosystems	 The Lorax Circle of life Celebrity head Bilbies, burrows and borrowed time Making connections 	PS 1.2	 Observation: Use the observation checklist to collect evidence of demonstrations of PS 1.2. Circle of life game: Students participate in a game that involves making connections between elements of an ecosystem as evidence of demonstrations of PS 1.2 (Activity 5). Making connections: Students demonstrate their ability to make connections between elements of simple ecosystems as evidence of demonstrations of PS 1.2 (Activity 8).
3. Reflecting on favourite spaces and places	9. Favourite places 10. Our park	TCC 1.4 PS 1.1 PS 1.2 PS 1.4	 Observation: Use the observation checklist to collect evidence of demonstrations of PS 1.4. My favourite place worksheet: Students organise and present information about places that are important to them as demonstrations of PS 1.4 (Activity 9). Our park: Students design and create a park environment as evidence of demonstrations of TCC 1.4, PS 1.1, PS 1.2 and PS 1.4 (Activity 10). Use the observation checklist to record evidence of these demonstrations.

Assessment

The assessment opportunities outlined are examples of how to assess students' demonstrations of the identified learning outcomes. As often as possible, negotiate assessment with students and support a variety of ways of demonstrating the learning outcomes. Reflect with students on evidence gathered when making judgments about their demonstrations of learning outcomes. Some students may require more time and/or other contexts in which to demonstrate these learning outcomes. Other modules may provide such time and/or contexts and the 'Levels 1 to 6 module learning outcomes maps' in the Years 1 to 10 Studies of Society and Environment Sourcebook Guidelines can be used to identify these modules.

Assessing learning outcomes at different levels Activities in this module are designed primarily for students working towards demonstrations of Level 1 learning outcomes. Assessment opportunities may need to be modified or created to enable students to demonstrate core learning outcomes before or after this level.

Resource 1 Assessment techniques include use of an observation checklist (Resource 1), consultation with individual students and focused analysis of work samples.

Using this module

Activities in this module assist education in, about and for the environment. Each approach cannot exist or function in isolation. Education in the environment emphasises the importance of providing experiences for students that take place out in the environment, whether it be the bush, a beach, backyard or other environment. Such experiences will assist in developing and enhancing students' awareness and appreciation of the environment. This approach aims to highlight the relevance and reality of environmental education through practical experience.

Education about the environment aims to provide students with a knowledge and understanding about the environment which will enhance their ability to make informed decisions and act in an environmentally responsible manner.

Education for the environment is the action component and the means by which change may be achieved. Students develop an informed concern and sense of responsibility for the environment. Education for the environment encourages students to identify their own values, beliefs and perceptions and to decide their future actions for the environment.

Activities may need to be modified to suit specific contexts.

If planning an integrated unit of work, links may be made to *The Arts, Mathematics, Science* and *Technology* key learning areas. Anticipated evidence of students' demonstrations of learning outcomes in other key learning areas would need to be identified. Consult the syllabuses and support materials of these key learning areas.

Background information

Terminology

In this module students have opportunities to become familiar with and use the following terminology: action ecosystem national park

brochure change clothes conditions consequences diary ecosystem elements environment forest future holiday job

national park past shelter timeline trees weather work

School authority policies

Be aware of and observe school authority policies that may be relevant to this module, particularly when conducting outdoor activities. For example:

- workplace health and safety policies when organising the indoor park
- sunsafe policy
- outdoor fieldwork policy.

Equity considerations

Activities take place in a supportive environment. They provide opportunities for students to increase their understanding and appreciation of equity through valuing diversity and challenging inequities. Activities encourage students to:

- recognise the impact human behaviour has on the environment
- recognise that humans are part of the environment and not set aside from it
- identify responsible environmental behaviour
- begin to respect and value the opinions and ideas of others
- begin to appreciate the range of viewpoints and values.

Some students with disabilities may need assistance with some activities. Advice should be sought from their support teachers. It is important that these equity considerations inform decision making about teaching strategies, classroom organisation and assessment.

Links

 This module has conceptual and process links to the following modules: Level 1: Growing and changing: Individual identity Level 1: Lean, green cleaning machine: Caring for the environment Level 1: Our island dream: Futures study Level 2: Creating tomorrow's world today: Present and future environments 				
Activities may offer opportunities for planning across key learning areas. However, it is important that the integrity of the key concepts, organising ideas and processes within key learning areas is maintained.				
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Possible links to Technology:

- TP1.1 Students gather knowledge, ideas and data from familiar environments and consider how they will use this information to meet design challenges.
- TP1.2 Students generate design ideas and communicate these through experimentation, play and pictures.
- TP1.3 Students make products that are meaningful to them, and describe their production procedures.
- TP1.4 Students express thoughts and opinions to evaluate their own and others' design ideas and products.
- M1.1 Students identify characteristics of materials and explain how materials are used in everyday products.
- M1.2 Students explore equipment and techniques for working with materials by experimenting and playing with a range of objects for meaningful purposes.

Evaluation of a unit of work

After completion of units of work developed from this module, collect information and make judgments about:

- teaching strategies and activities used to progress student learning towards demonstrations of core learning outcomes
- opportunities provided to gather evidence about students' demonstrations of core learning outcomes
- future learning opportunities for students who have not yet demonstrated the core learning outcomes and to challenge and extend those students who have already demonstrated the core learning outcomes
- the extent to which activities matched needs of particular groups of students and reflected equity considerations
- the appropriateness of time allocations for particular activities
- the appropriateness of resources used.

Information from this evaluation process can be used to plan subsequent units of work so that they build on, and support, student learning. The evaluated units of work may also be adapted prior to their reuse. For further information, refer to the 'Curriculum evaluation' section in the sourcebook guidelines.

Activities

Phase 1 Finding out about environments and change

Core learning outcomes emphasis: TCC 1.4, PS 1.1

In this phase, students find out how change over time affects a familiar environment and explore the relationship between environmental conditions and people's clothing, food, shelter, work and leisure.

Activity 1 Different places

Teaching considerations

Collect a variety of postcards or brochures from different holiday destinations.

Show and discuss postcards/brochures from different holiday destinations. If appropriate, encourage students to share their own travel and holiday experiences. Ask students to recall or suggest items they needed or may need for a holiday.

Encourage students to infer and make connections between environmental conditions and people's clothes, food, shelter, work and leisure. To assist students to infer relationships, consider questions such as:

- What would the weather be like if we needed to wear a knitted cap? How do you know this?
- Why do you think there is a large open veranda around this timber hut near this tropical beach?

Activity 2 Pack your bags

Teaching considerations

Organise the following resources:

- pictures of different environments, food, shelter and work and leisure equipment
- a bag and a range of clothing, work and leisure items (for the game).

Support materials and references Show and discuss a number of pictures of different environments — for example, desert, tropical, alpine and grassland. A simple factual text such as *Different Ways of Life: Four Places, Four Peoples* (Howes 1993) may be a useful stimulus. Ensure students understand terms such as items, destination and environment.

Ask students to consider what it might be like to live in each of these environments. Questions to aid discussion may include:

- Would it be hot/cold/dry/wet in this place? How do you know this?
- What sort of clothing would you need if you lived in this environment? What information tells you this?
- What types of food might you find growing in this area? How do you know this?
- What types of games might you be able to play here? Why? What items or equipment would you need to play these games?

Introduce the game 'Pack your bag'. Arrange students in a large circle, indoors or outdoors. Place the bag in the centre of the circle and scatter assorted clothing, work and leisure items around it. Enlist students' help to create a jingle about going on a trip, such as: 'Here I go, Here I go, Far far away, Help me pack my bag, For I am off today!'. Choose a student to play the game. This student walks around the inside of the circle while the other students say/sing the jingle once. Once the jingle is finished, the student stops near the items. Another student is asked to nominate a place or environment, either verbally or using pictures. The first student then packs the bag with appropriate items for this environment. Discuss the choices with the class. Encourage/assist students to suggest reasons for their choices.

To assist students to use higher order thinking skills, differing parameters could be added to the game — for example, 'Choose two pieces of clothing that you would wear in this environment', 'Choose one item that you might need if you worked in this environment' or 'Choose one item that you think you will need most in this environment and tell us why'.

Assessment Resource 1 At the end of the game, students match picture cards showing environmental conditions with clothing, food, shelter, work and leisure as evidence of demonstrations of PS 1.1. Record this evidence on Resource 1.

Activity 3 The order of things

Provide students with a range of objects that illustrate change — for example, a new green leaf, a leaf that has changed colour, a crumbling dry brown leaf; a new tin can, a semi-rusted can, a very rusted can; photographs of the same environment during different seasons or from early to present times. Ask students to place these objects in order from oldest to newest and explain why they placed the objects in that order.

Discuss what changes occur over time in the students' familiar environments — for example, changes that occur to trees and weather during different seasons and over time or changes that occur as objects or people age.

Assessment Resource 1 Students' descriptions of the effects of change over time in a familiar environment may provide evidence of demonstrations of TCC 1.4. Record this evidence on Resource 1.

Phase 2 Investigating elements within simple ecosystems

Core learning outcomes emphasis: PS 1.2

Through discussion of the Dr Seuss story *The Lorax*, students investigate and make connections between elements within simple ecosystems. Using this knowledge, students investigate elements within other ecosystems, such as ponds and the habitats of particular animals.

Activity 4 The Lorax

While reading *The Lorax*, encourage students to predict what may happen next. Read up to this point in the story: 'And at that very moment, we heard a loud whack! From outside in the fields came a sickening smack of an axe on a tree. Then we heard the tree fall. The very last Truffula Tree of them all!'. Invite students to tell/draw/enact how they think the story will end. Continue to read the rest of the story and compare students' predicted endings with the actual ending. Questions may include:

- · How was your version different from/similar to the story by Dr Seuss?
- What happened to the Lorax, Truffula and Oncler in both the original story and your version?
- · How was the environment treated in each story?
- What do you think would be a better ending? Why?
- · How would you fix some of the problems discussed in the story?
- How did this story make you feel? Why?

Assist students to develop a class story timeline (series of events) and a simple web that shows how and why elements are interconnected within this story.

A story timeline for The Lorax

Oncler finds a glorious place \rightarrow Cuts down one Truffula Tree. Meets the Lorax \rightarrow Oncler makes a Thneed. Cuts down more Truffula Trees. Lorax sends hungry Bar-ba-loots away \rightarrow Oncler builds bigger factory and roads. Lorax sends off Swomee Swans \rightarrow Pond becomes glumpy. Humming fish leave. Last Truffula Tree cut down. Lorax leaves.

Assessment Resource 1 Begin to record observations of students' demonstrations of PS 1.2 on Resource 1.

Activity 5 Circle of life

Using photocopied or drawn illustrations of the characters in *The Lorax*, assist students to recall the characters and what happened in the story.

Select six to eight students to form a circle and call this circle a 'circle of life'. Give these students a picture of a character and a written description of the event that involved the character. Choose another student to act as the 'connector' within the circle of life. Invite the rest of the class to suggest how each of the elements within the circle might be connected — for example, Oncler builds factories and roads \rightarrow Truffula trees cut down \rightarrow the Lorax leaves. The connector uses wool or something similar to make links between the various elements to create a web within the circle.

Students reflect on and discuss their thoughts and ideas about this activity. Assist students to conclude why one element connects to a certain element and not to others. Ensure students appreciate the diversity of responses — for example, discuss why students agree/disagree with two elements being connected. Encourage students to use terms such as environment, ecosystem and connections in their responses.

Assessment Resource 1 Observations of students' participation in the discussion and game may provide evidence of demonstrations of PS 1.2. Use Resource 1 to record this evidence.

Activity 6 Celebrity head

Teaching considerations

You will need a range of animal picture/word cards and headbands.

This activity assists students to understand how animals' needs are met by the environment in which they live. Select a student to sit in front of the class. Attach one of the animal cards to a headband and place it on the student's head. This student has to try to guess the animal on the headband by asking questions. Tell students that they can only give 'yes' or 'no' responses. Questions may need to be modelled for students and could include:

- Am I a wild animal? (type)
- Do I have feathers? (covering)
- Have I got eight legs? (body parts)
- Do I make a noise if someone is near? (actions)
- Is my favourite food a juicy gum leaf? (food)
- Do I live in a tree? (home)
- Am I eaten by kookaburras? (predators)

As the game progresses, use students' responses to develop a concept map that displays information about each animal's place in an ecosystem. After the game, discuss how animals' needs are related to the environment in which they live. Develop a simple web for an animal discussed during the game — for example, kookaburras sit in trees \rightarrow kookaburras eat snakes that live in trees and slither along the ground \rightarrow kookaburras pick up snakes in their beaks and fly off to nearby trees to eat them.

Activity 7 Bilbies, burrows and borrowed time

This activity is more appropriately conducted outdoors. Introduce the bilby and explain where and how it lives. Discuss issues related to the life of the bilby and the ecosystem in which it lives. Ensure students are aware that it lives in burrows; leaves the shelter of the burrow to feed on beetles, grasshoppers, termites, fungi and bulbs; and is an endangered species because a large number of feral animals feed on the bilbies and take over their burrows.

Assist students to participate in a game similar to 'musical chairs' to help them understand relationships and connections between elements in the bilbies' ecosystem. Divide the class into bilbies, foxes, feral cats and rabbits. Place some boxes around the classroom to represent burrows. Explain that the bilbies will need to move between the burrows to feed. Tell students that bilbies are safe in their burrows, but that foxes, cats and rabbits also use burrows.

Play the game with animals moving and feeding while you clap and then rushing to a burrow when you stop. Reduce the number of burrows and play the game again. Ask students to reflect on what happened when the number of burrows was reduced and assist them to understand why this may occur in the bilbies' ecosystem. Refer to the relationships between elements in the bilbies' ecosystem — for example, farmers ploughing fields may destroy burrows; the number of foxes/feral cats might increase, which means that the bilby becomes endangered.

Activity 8 Making connections

Teaching considerations

Prepare picture/word cards that represent elements of a pond ecosystem — for example, frog, water, lily pads, rocks, frogs' spawn, dragonfly, ducks, birds, fish, waterweeds, snake and nest with eggs.

Show, name and discuss the pond ecosystem cards. Assist students to suggest relationships between elements in this pond ecosystem — for example, frogs eat dragonflies \rightarrow birds eat waterweeds \rightarrow snakes eat duck eggs from the nest.

Place the picture/word cards face down on the floor. Invite individual students to turn over two or more cards and describe the connections (if any) between the elements on them. Alternatively, modify this game by removing some of the original elements and adding some elements which do not belong to the pond ecosystem. Discuss the added elements and their possible impact and the effect of removing the original elements. Questions include:

- What do you think may happen to the frog if water in the pond was removed?
- If there are no insects for the birds to eat, what might happen to the birds?
- What might happen to the fish in the pond if cats are introduced to the area?

Assessment Resource 1 Students' ability to show connections between elements of a simple ecosystem may provide evidence of demonstrations of PS 1.2. Record this evidence on Resource 1.

Phase 3 Reflecting on favourite spaces and places

Core learning outcomes emphasis: TCC 1.4, PS 1.1, PS 1.2, PS 1.4

Students identify and reflect on places that are important to them by organising and presenting information. Through a cooperative class project, students consider the environment of a place and the elements that make up this ecosystem.

Activity 9 Favourite places

Students identify their favourite places within the school/community. This may include areas such as the playground, a quiet area, the library, playing fields, park, arbour or shady tree. Ask students to reflect on why these places are important to them, how such places make them feel and how they may be able to improve their special places. Encourage students to discuss how they interact with other people, animals, plants and non-living elements within this favourite place. Questions to assist reflection and discussion may include:

- Is there a colour that reminds you of your special place?
- Does your place have any special or different smells?
- What sounds do you hear when you are in this special place?
- How does this place make you feel? What things might feel different here?
- What things would you tell your friend about this place?
- Do other people go to this place? Why?
- **Resource 2** Assist students to record their reflections about their favourite places by drawing/writing in appropriate sections of the worksheet (Resource 2). Conference with individual students to assist with making judgments about their demonstrations of PS 1.4 and to gather further evidence of demonstrations of PS 1.1 and PS 1.2.
- Assessment Resource 1 Student conferences and analysis of their worksheet responses may provide evidence of demonstrations of PS 1.4. Record this evidence on Resource 1.

Activity 10 Our park

Teaching considerations

You will need a variety of materials such as fabric, coloured paper and card, paints and recycled 'junk'.

Support materials and references Use photographs, maps, sound recordings and artefacts to introduce and discuss the concept of parks and in particular national parks. Begin by discussing the features of parks and exploring the features of national parks. (The early childhood book *Worth Saving* by Pigdon and Woolley includes large colour illustrations and large text about World Heritage areas. Ten of the World Heritage-listed areas in Australia have been set aside for their natural and/or cultural significance, including Kakadu National Park, Uluru National Park and the Australian East Coast Temperate and Subtropical Rainforest Parks.)

Emphasise the uniqueness of national parks and explain that everyone has access to parts of these areas and a responsibility to treat them with care and respect. Discuss why people consider natural environments such as national parks, beaches and deserts to be their special places.

- What is the environment like in _____?
- Does this area have mountains? Water? Forests?
- What large and small plants might you see?
- What type of animal homes might you see?
- What non-living things might you find in this natural environment?
- Have you ever been to a _____? If you have, what was this environment like? What did it look, smell, feel and sound like? Provide students with opportunities to look at pictures and listen to sound recordings to help them remember what an environment was like.

Pose the following 'problem': We would like to visit a natural environment such as a national park, but the nearest one is too far away. What could we do to help us to understand what a national park would look like without actually visiting one? Record students' suggestions and encourage class discussion.

Assist students to create a park-like environment. Consider using the following ideas:

- In small groups, students list living and non-living things they might find in their chosen environment.
- Discuss students' responses and develop a class list, which students will use to design and create this environment.
- Assign specific tasks to each group for example, create animal homes; draw, paint or create animals, birds and insects; collect or make plants, trees and rocks. Encourage students to suggest ideas for the design and creation of specific features such as a pond, creek or waterfall, where walking tracks can/cannot go and what things the public could bring in/not bring in to this environment.
- Assist students to explain why they feel certain elements should/should not be included in this environment. Suggest cause–effect relationships or consequences of actions — for example, camp fires may/may not be allowed due to the type of natural environment; litter bins need to be provided so that visitors can clean up after themselves, which in turn ensures that animals only eat their natural food.
- Assist students to create a model of the natural environment. Ask students to reflect on and consider what they might need to do to protect such an environment. Questions may include:
 - Do we need to have rules for this special place? Why?
 - What do you think would be important rules for this environment? Why?
 - How could we encourage other students to care for this environment?

Invite other classes/community members to view this model environment. Students may participate as park guides, rangers and kiosk proprietors to consider the human impact on their modelled environment.

Assessment Resource 1 Students' participation in the design and creation of a model of a natural environment may provide evidence of demonstrations of TCC 1.4, PS 1.1, PS 1.2 and PS 1.4. Complete recording of this information on Resource 1.

Observation checklist

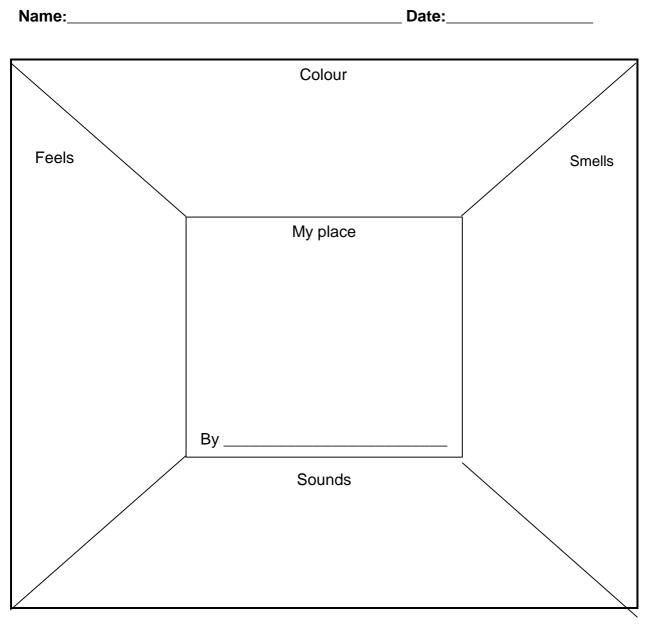
Resource 1

Student's name:	Date	Code/comments W/T: working towards demonstrations of Level 1 learning				
Criteria		outcomes D: demonstrating Level 1 learning outcomes				
TCC 1.4 Students describe effects of change over time in a familiar environment.						
 identifies cause-effect relationship of actions 						
 identifies a range of familiar environments 						
 clearly articulates the effects of change 						
 discusses the effects of change on things in familiar environments 						
PS 1.1 Students match relationships between environmental conditions and people's clothes, food, shelter, work and leisure.						
 identifies a range of environmental conditions 						
 makes inferences about environmental conditions and human needs 						
 matches relationships between environmental conditions and clothing, food, shelter, work and leisure 						
PS 1.2 Students make connections between elements of simple ecosystems.						
 identifies elements of simple ecosystems 						
 identifies a range of simple ecosystems 						
 identifies connections between elements of simple ecosystems 						
 makes inferences about connections between elements of simple ecosystems 						
PS 1.4 Students organise and present information about places that are important to them.						
 articulates and presents ideas and information clearly 						
 chooses appropriate means of organisation and presentation 						
 identifies clear links between a place and its personal importance 						

My favourite place worksheet

Resource 2

My favourite place



Student comments:

Teacher comments:

- □ working towards demonstration of **PS 1.4**
- demonstrating **PS 1.4**

Support materials and references

Gould League 1981, Environmental Starters, Gould League of Victoria Inc., Melbourne.

Howes, J. 1993, *Different Ways of Life: Four Places, Four People*, Macmillan Education Australia, South Yarra, Vic.

Pigdon, K. & Woolley, M. 1994, Worth Saving, Macmillan Education Australia, South Yarra, Vic.

Queensland Department of Education 1993, P-12 Environmental Education Guide, Brisbane.

Ryan, F. & Ray, S. 1991, *The Environment Book: Activities and Ideas for Environmental Education*, Macmillan Education Australia, South Yarra, Vic.

Seuss, Dr. 1972, The Lorax, Collins, London.

Websites

(All websites listed were accessed in June 2002.)

Clean Up Australia. www.cleanup.com.au/

Department of Environment and Heritage, Canberra. www.ea.gov.au/

Department of Natural Resources and Mines, Queensland. www.nrm.qld.gov.au/

United Nations Educational, Scientific and Cultural Organization. <u>www.unesco.org/</u> Provides information on World Heritage sites and areas in danger. This sourcebook module should be read in conjunction with the following Queensland School Curriculum Council materials:

Years 1 to 10 Studies of Society and Environment Syllabus Years 1 to 10 Studies of Society and Environment Sourcebook Guidelines Studies of Society and Environment Initial In-service Materials

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