Lower Primary: Level 1 **2** 3 4 5 6

# Eco-consumerism: Conserving the environment

#### **Strand**

Time, Continuity and Change Place and Space Systems, Resources and Power

## **Core learning outcomes**

Time, Continuity and Change	TCC 2.3	Students cooperatively evaluate how people have contributed to changes in the local environment.
Place and Space	PS 2.2	Students predict possible consequences for an ecological system when an element is affected.
	PS 2.3	Students cooperatively plan and care for a familiar place by identifying needs of that place.
	PS 2.5	Students express a preferred future vision for a familiar place based on observed evidence of changes and continuities.
Systems, Resources and Power	SRP 2.1	Students investigate the origins and processing of a familiar product to describe relevant conservation strategies.

## **Purpose and overview**

Through participation in activities in this module, students begin to understand the relationship between water availability, use and consumption and the effect this relationship has on people and the environment.

A modified action research model is used to sequence activities in three stages of inquiry. Phase 1 identifies and investigates changes in the environment and the use and consumption of water in local, Australian and global settings. Students evaluate the contributions people have made to change over time in school and local environments by gathering historical evidence such as photographs, pictures and paintings. Cause–effect relationships and the consequences for ecological systems when water is affected are also investigated.

Phase 2 explores the conservation of water within home and school settings. Conservation strategies such as water recycling, 'metered' water use and alternatives to water use are explored.

Phase 3 focuses on empowering students to select, implement and evaluate actions as 'waterwise' consumers in familiar settings. By identifying the water conservation needs of school and home, students discuss, reflect on and, with assistance, make inferences about the positive changes and benefits of their actions in these environments now and in the future.



Phase	Activities	Core learning outcomes	Assessment opportunities
Identify and investigate a problem  What's the view like?	<ol> <li>School window</li> <li>Change in the local area</li> <li>What if?</li> <li>Water comes from a tap, doesn't it?</li> <li>Water near and far</li> </ol>	TCC 2.3 PS 2.2 PS 2.5 SRP 2.1	Visual record: Students create a cause–effect chart or pictorial/photographic essay of changes in the local environment (Activity 2) as evidence of demonstration of TCC 2.3.  Interview plan/verbal responses: Students participate in an interview and pre- and post-interview discussion (Activity 3) to demonstrate PS 2.2 and TCC 2.3.  Observation checklist with criteria: Students enact water cycle stages in small groups (Activity 4), particularly to demonstrate SRP 2.1 (Resource 1).
2. Gather and evaluate data — list possible actions  A problem shared	<ul><li>6. Waterwise — fact find!</li><li>7. Drip, drop, splash!</li><li>8. What's a wurvey? (It's a water survey)</li></ul>	TCC 2.3 PS 2.2 PS 2.3 SRP 2.1	Water facts research: Students research facts about water, its nature and use (Activity 6) to demonstrate PS 2.2.  Home and school water usage survey: Students survey family members, staff, students and school community members about their water use habits (Activities 6 and 8) to demonstrate TCC 2.3.  Observation checklist with criteria: Continue observing and recording students' demonstrations of TCC 2.3, PS 2.2, PS 2.3 and SRP 2.1 through participation in group work activities (Resource 1).
3. Select, implement and evaluate best action  Let it rain on the future	<ul><li>9. Waterwise</li><li>10. Becoming an eco-school</li><li>11. Future past</li></ul>	TCC 2.3 PS 2.3 PS 2.5 SRP 2.1	Verbal responses: Students predict the positive impacts of water conservation strategies in home and school settings (Activity 9) to demonstrate PS 2.2. Students express a preferred future vision for home and school settings (Activity 9) to demonstrate PS 2.5.  Verbal responses/participation: Students participate in decision-making processes to plan and implement action (Activity 10) to demonstrate PS 2.3.  Visual representation: Students express preferred futures through self-selected media (Activity 11) to demonstrate PS 2.5.  Observation checklist with criteria: Conclude recording students' demonstrations of TCC 2.3, PS 2.3, PS 2.5 and SRP 2.1 (Resource 1).

## **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.

#### Resource 1

Many of the suggested ways to collect evidence use informal techniques such as teacher observation during group discussion and cooperative activities. Other activities may be used as opportunities to gather further evidence of students' demonstrations of learning outcomes. To assist in making consistent judgments about these demonstrations, use of criteria is suggested. Where appropriate, students may be involved in developing such criteria.

Further opportunities to assess students' demonstrations of PS 2.2 and PS 2.5 exist in module 2.6, *Creating tomorrow's world today: Present and future environments*.

## Using this module

# Action research

This module uses an action research model of inquiry, which is characterised by a community problem-solving approach. The key role of the teacher is, therefore, to facilitate. Action research involves repeated cycles of observing, planning, acting and reflecting. For further information about inquiry models, refer to *Inquiry Approaches in Primary Studies of Society and Environment Key Learning Area* available on the Queensland School Curriculum Council website at www.qscc.qld.edu.au.

Activities in this module focus on investigation of issues relating to water usage and conservation and catchment care. Water has been chosen as the environmental focus as it is a global conservation issue. Another issue that relates specifically to students and local contexts may be used. For further activity ideas, refer to the elaborations of core learning outcomes in the *Years 1 to 10 Studies of Society and Environment Sourcebook Guidelines*.

# Discussion strategies

Students are encouraged throughout this module to discuss questions, issues or topics in pairs, small groups or as a whole class. Effective discussion requires *active listening*. The discussion process needs to be taught to young learners, who will require time and practice to master discussion skills. The following will enhance discussions in the classroom:

- setting ground rules for group discussion
- knowing how to ask questions in a discussion
- being aware of group dynamics during a discussion.

There are many ways to assist students to identify and practise positive discussion behaviours. The following are suitable for this age group:

**Goldfish bowl discussions:** Selected students observe the discussion dynamics of their peers. Observers report on the helpful and unhelpful discussion behaviours they saw.

**Discussion maps:** An observer visually records all the exchanges during a discussion. The resulting diagram clearly shows who is talking to whom, who is dominating and who is not contributing to the discussion.

**Evaluating group discussions:** Reflecting on the discussion process, either as a class or an individual, enables students to congratulate themselves on their productive behaviour and identify areas that require improvement. While activities in this module provide examples of class and individual reflection and tools that students could use to

evaluate discussions, they may also construct their own. This evaluation of group discussions is linked to learning outcomes in this module.

For further information about discussion strategies refer to *Inquiry Approaches in Primary Studies of Society and Environment Key Learning Area*.

#### Data selection and collection techniques

Students need to be guided when gathering data to ensure they select and evaluate relevant data. Guiding guestions to consider are:

- What do we really want to use?
- · Which is the best information to use?
- · What can we leave out?
- What information do we still need?

#### Collection of data could include:

- questionnaire to be completed by younger and older people to gather facts, opinions and feelings
- interview
- old photographs, books, pictures of local area history
- surveys and scattergrams
- observations
- artefact collections from local community museums
- plot profile
- timeline
- cause-effect charts.

#### **Futures**

The activities in this module promote a futures perspective that assists students to identify possible, probable and preferred individual and communal futures through consideration of water conservation strategies at individual and group levels in home and school settings. Students are encouraged to take responsibility for their actions and decisions, to think ahead and to enact, with optimism, their visions of preferred futures.

## **Background information**

## Terminology

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

access consume misuse scattergram waste catchment environment pollution survey water conservation interview questionnaire

## School authority policies

Be aware of and observe school authority policies that may be relevant to this module — for example, workplace health and safety policies.

## Equity considerations

Activities take place in a supportive environment. They provide opportunities for students to increase their awareness, understanding and appreciation of the need for environmental equity. Environmental equity relates to being fair, just and reasonable with interaction and use of the natural environment, and its associated issues of protection and conservation. 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:

- work collaboratively and cooperatively towards a shared vision
- value and respect the opinions and ideas of others
- recognise the importance and impact of human behaviour on the environment
- recognise that humans are part of the environment and not set aside from it
- identify responsible environmental behaviour.

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

#### Studies of Society and Environment

This module is one of a suite of modules for Levels 1 to 6. See the Queensland School Curriculum Council website at www.gscc.gld.edu.au for more information.

This module has conceptual and process links to the following modules:

- Level 1: Growing and changing: Individual identity
   Ready, set, go: Rights and responsibilities
   Hideaway spaces, special places: Elements of the environment
   A world full of stories: Stories of diverse cultures
   Lean, green cleaning machine: Caring for the environment
- Level 2: Creating tomorrow's world today: Present and future environments
- Level 3: Environments past and present: Management of Australian environments
   Our future: Past and future study
   Everyone can have a say: Local decision making

#### Other key learning areas

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.

Possible links to English (in development):

- Knowing that people use speaking and viewing to communicate with others.
- Knowing that people use writing and shaping to communicate with others and using simple factual and narrative texts common to their everyday experiences.

#### Possible links to Science:

- EB 2.1 Students identify and describe changes in the obvious features of the Earth and sky (including changes in the appearance of the moon).
- EB 2.2 Students identify and describe short- and longer-term patterns of events (including weather and seasons) that occur on the Earth and in the sky.
- EB 2.3 Students discuss how their community uses resources and features of the Earth and sky.
- NPM 2.1 Students group materials on the basis of properties (including solubility, texture and hardness).
- NPM 2.2 Students recognise ways in which changes in properties of familiar materials occur (including temperature change and magnetism).
- NPM 2.3 Students explain why common materials are used in particular situations.

## 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 Identify and investigate a problem

Core learning outcomes emphasis: TCC 2.3, PS 2.2, PS 2.5, SRP 2.1

Students investigate the environmental changes (natural and built) that have occurred in their local surroundings over time. The issue of water as a precious resource is identified from local, national and global perspectives.

#### Preparation

The following preparation may need to be carried out before this module is implemented:

#### Support materials and references

- collect children's literature that relates to change and human impact on environments (see 'Support materials and references')
- collect photographs, videos, pictures and oral histories that identify changes and continuities within the local community
- consult local community groups involved in an environmental/catchment care project
- collect stimulus pictures of different environments for example, a garden, farm, pond, factory or mining site
- collect simple maps of Australia and the world
- invite elderly residents from the community to participate in a discussion with students about water use 'in the past'.

## Activity 1 School window

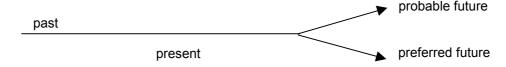
Support materials and references

Use Jeannie Baker's *Window* to explore changes that have occurred within the natural and built environment of the school. A number of other books are also available that relate to change and human impacts on environments, including *My Place*, *The Lorax*, *Dinosaurs and all that Rubbish* and *The Story of Rosy Dock*.

Links to English

Read *Window* by Jeannie Baker. Discuss the major changes that occur in the story. A plot profile or timeline is a useful way of documenting changes. Using a consequence chart, ask students to infer what the consequences (both positive and negative) of identified changes are and whom they might affect.

Using a futures timeline, ask students to consider alternative scenarios to those in the story. On a futures timeline, the top line represents future events and the lower line represents another version of events due to a different set of changes that students see as a more preferable future. For example:



Use a collection of photographs, pictures and paintings of the school/local community over time to develop a class version of *Window*. This *School window* text provides opportunities for students to record the history of changes and continuities within the school/community and the effects the changes have had.

Assist students to gather information from past and current students and members of the community about the history of the school/community and how it has developed and changed. A cause–effect chart can be used to collate this information and make comparisons with information gathered earlier in this activity.

Changes in our school — Cause–effect chart					
Changes that occurred	People who contributed to the change	Why changes occurred	Positive effect	Negative effect	What if a different choice had been made?

## Activity 2 Change in the local area

#### Links to Science

Assist students to identify continuities and changes in the local community by walking around the local area or using photographs, videos, pictures and oral histories. Consultation with a community/school group involved in a catchment or environmental project may help with information gathering.

Encourage students to make links between changes that have been identified within the school and changes that have occurred within the local community — for example, the impacts of a bushfire on community/school buildings; the establishment of new housing estates and new school buildings; or the effects of involvement in a Clean Up Australia campaign.

In small groups, assist students to document the changes, noting who was responsible for the change and whether the effects of change were positive or negative. Encourage students to present their information on the cause/effect chart begun in Activity 1 or as a pictorial essay or photographic presentation.

#### Assessment

This activity may provide evidence of students' demonstrations of TCC 2.3.

#### **Teaching considerations**

#### Resource 1

Cause—effect charts and pictorial essays could be collected as evidence of demonstrations of learning outcomes. An assessment instrument such as an observation checklist with criteria (see Resource 1) could provide evidence of how students cooperatively evaluated contributions.

## Activity 3 What if ...?

#### Links to Science

Use a number of stimulus pictures of ecological systems such as a garden, farm, pond, or factory to create interest in water as a precious resource. Ask students to envisage/draw what impact a lack of water would have on these places and how they would change.

Ask students to identify how and why an absence of water would affect the school. Ask students to refer to their findings in Activities 1 and 2 and consider:

- what outcomes or changes might have occurred if there had been a shortage of water
- what might have happened if there had been a flood
- how water was used by the community in the past.

This part of the activity may provide evidence of students' demonstrations of PS 2.2.

# Assessment Resource 2

Invite elderly citizens to visit the classroom to discuss water use in the past. Encourage and assist students to develop interview questions about the accessibility and use of water in earlier times. Refer to Resource 2 for a sample questionnaire.

#### Assessment

Students will use data collected during Activities 3, 6 and 8 to evaluate water usage in different times and contexts in Activity 10. Responses during discussions may provide evidence of demonstrations of TCC 2.3 and PS 2.2.

#### Support materials and references

#### **Teaching considerations**

A range of resources are available that relate to water usage, drought, the importance of water and human reliance on water. See 'Support materials and references' for further information.

## Activity 4 Water comes from a tap, doesn't it?

Links to Science

Support materials and references

Assist students to conceptualise the origins of water. Ask them to identify the origin of a glass of water. Share and discuss responses. Through discussion, assist students to explore understandings by developing a simple diagram or dramatising the origin of water and the processes involved in producing a glass of water (use *Whizzy's Incredible Journey* as a guide). Divide the students into small groups to enact the water cycle and/or water process, with or without props, by miming the actions of the elements. For example: **Water cycle**: rain clouds, water drops, roofs of houses, trees, plants, rivers, lakes and puddles. **Water process**: rain clouds, water drops, roof guttering, dam, water pipes, water treatment plants, water storage tank/reservoir, bore pump and water tap.

Ask students to suggest actions humans might take to assist in water conservation. In small groups, students list actions they think would be effective and the result these actions might have on water conservation.

Assessment Resource 1 Record student responses on the observation checklist during group work to assess students' demonstrations of SRP 2.1.

#### **Teaching considerations**

Support materials and references

The Department of Natural Resources and Mines has produced some particularly useful kits and posters. *Whizzy's Incredible Journey* provides a clear outline of the origins of water, from the water cycle through to water coming out of the tap. The poster *What is a catchment?* provides a simulation of possible interactions within a catchment and will be useful in helping students to develop an understanding of what a catchment is. The Department of Natural Resources and Mines, Healthy Waterways, The Environmental Protection Authority or local catchment care groups also produce a range of resources that explain how catchments can be cared for.

## Activity 5 Water near and far

Expose students to the environmental issue of water being a finite resource that impacts on all living things through a simple investigation of water availability in other countries.

Assist students to explore maps, keys and legends and to consider rainfall, climatic conditions and population of countries. Assist students to identify countries which they are familiar with. Identify and discuss other countries and continents. Identify the key/legend that quantifies rainfall. Ask students what they think the shaded colouring of each key means. Establish that a deeper colour signifies greater rainfall than a lighter colour. Questions to aid discussion include:

- Which countries have a small annual rainfall? How would this affect the people living in this country? (consider food and water supplies)
- Which countries have a larger annual rainfall? How would this affect the people living in this country?

Encourage students to recall the **water cycle/water process** concepts explored in Activity 4 and to use this information to aid their understanding of the cause–effect relationships between amount of rainfall and water availability. Identify and name familiar places in Australia. Discuss Australia's annual rainfall distribution. Questions include:

- Which places have the most rain? Which places have the least rain? Why do you
  think this is? (consider mountains, coastline, catchment areas, weather patterns and
  climatic regions)
- How would this affect the supply of water and food in these places?

Find a map that shows the percentage of the total population with access to safe drinking water. Discuss and compare the access to safe drinking water of different countries/regions. Some countries have very low rainfall and rely on underground water sources. Refer to the water process and assist students to explore ways people in Australia and other countries obtain water (both treated and untreated water supplies). Examples include mains, tanks, artesian bores, village water wells and hand pumps.

#### Phase 2 Gather and evaluate data — list possible actions

Core learning outcomes emphasis: TCC 2.3, PS 2.2, PS 2.3, SRP 2.1

Students evaluate water usage practices by gathering data in home and school settings from now and the past. Students begin to understand what characterises wasteful and waterwise practices.

#### **Activity 6** Waterwise — fact find!

#### **Teaching considerations**

Sensitivity and respect for diversity of water use practices will need to be displayed when students share water usage data collected from home.

#### Links to **English** Assessment

Brainstorm endings to the statement starter: 'Without water ...'. Write student suggestions on a large sheet of paper. Use various resources that display water usage information to promote responses to the statement starter. Use student responses to provide a focus for research relating to water. Students' research may provide evidence of demonstrations of PS 2.2.

Develop a class summary or pictorial representation of the research findings. Provide students with paper in the shape of a water drop on which to record their facts for a class display. Ask students to collect data about water usage at home — for example, How many litres of water are used to wash up dishes? How many litres of water are needed to fill the washing machine? How much water is used to boil an egg? How much water do you drink each day? Other questions can be collaboratively brainstormed and included in this research. Once compiled, these findings may be recorded as a visual graphic such as a scattergram.

#### Water usage — data collection

Data

Name:	Date:				
How much water did I use at home this week?					
	Wash hands	Drink water	Flush toilet	Washing up	
Day 1					
Day 2					

#### Assessment

Data gathered during this activity will be used to inform students' reflection on personal behaviour and action plans for water use in home and school environments. Evidence of demonstrations of TCC 2.3 may be collected.

#### **Activity 7** Drip, drop, splash!

#### Resource 3

Read the story 'Drip, drop, splash!' (Resource 3). Ask students how many times water is referred to and how, when, where and why it is used. Record the references to water on a large sheet of paper.

Assist students to develop a diary of how, when, where and why they use water during a day at school. Collate and summarise this data for the class. Assist students to compare this data with the data from Activity 6. Identify similar/different facts relating to water use in each setting — for example:

- At home we use water for cooking every day, but at school we don't use water for cooking every day.
- At home and school we water our gardens.
- At school and home I wash my hands before cooking and eating.

## Activity 8 What's a wurvey? (It's a water survey)

Support materials and references

**Teaching considerations** 

The poster from the Environmental Protection Agency kit *Reduce, Reuse and Recycle: A Source Book — Preschool to Year 3* may be a useful introductory focus point for discussion.

Links to Science

To focus students' attention beyond personal use of water and on to community use, assist them to develop a survey to gather data about water usage within the school.

Discuss survey questions that focus on who uses water, for what purpose and how much they use. Seek assistance from other teachers, students, school staff and volunteers within the school. The groundsperson may be able to provide water consumption readings.

Students form small groups to conduct the survey and present their findings. Collate findings into a class summary.

Walk students around the school to identify water usage that may not have been identified in the survey — for example, hydroboils in the staffroom, hot water systems, sprinklers, fish tanks, fire hoses and solar heating systems. Keep a record of school water usage to see if future actions influence the amount used. Discuss school water usage and ask students if or how water is misused or wasted.

You may wish to gather and evaluate data about the school's water usage over time. Records of meter readings and payments may be available from school records.

Assessment

This activity may provide evidence of students' demonstrations of TCC 2.3.

## Phase 3 Select, implement and evaluate best action

Core learning outcomes emphasis: TCC 2.3, PS 2.3, PS 2.5, SRP 2.1

Students reflect on their own water use practices and those of others to predict future environmental consequences. To become more critical consumers of water, students are assisted to select, implement and evaluate short-term and longer-term action plans to aid water conservation in the home and school.

## Activity 9 Waterwise

Use the information gathered in the survey in Activity 8 to assist students to list key water issues within the school. Using this negotiated class list, students work in small groups to identify possible solutions to each of the issues. Each group shares its solutions and the class identifies which solutions are likely to be most effective.

Encourage students to suggest possible actions that might be taken to achieve the solution and to identify possible positive and negative results of these actions. The following is an example of how to collate these decisions.

#### School water usage issues

Identified problem	Possible solution	Action	Positive/negative result of action
dripping taps	replace washers	ask janitor to replace washers	wasted water saved

## Assessment

If time and interest permits, students could create an action plan for home water conservation based on data gathered in Activity 6. Students' predictions of how these actions will make a positive impact on water use at home may provide evidence of demonstrations of PS 2.2. Action plans devised by students that express a preferred future vision for water use at home may also provide evidence of demonstrations of PS 2.5.

## Activity 10 Becoming an eco-school

Encourage students to reflect on their attitudes towards water usage by asking questions such as:

• Before you took part in these activities, did you give much thought to how you used water and whether your use was 'waterwise'?

# Support materials and references

The kit *Reduce, Reuse and Recycle: A Source Book — Preschool to Year 3* may help you to define the term 'waterwise'.

Discuss whether other students and adults in the school community may be thinking the same way about water use. Encourage students to analyse the data gathered in Activities 3, 6 and 8 to determine how their personal attitude towards water use has changed.

Students suggest actions that may be made to positively influence other people's water consumption and conservation behaviour in the school. Possible actions might include: appointing water monitors to check taps are not left running; introducing a school-based awareness program; presenting information about how money may be saved on water rates and, as an incentive to students, refunding possible savings into student-initiated projects and resources.

#### Assessment

Students' participation in discussions may provide evidence of demonstrations of PS 2.3.

## **Activity 11 Future past**

Use the text *School window* (created in Activity 1) and local area history evidence gathered in Phase 1 activities to encourage students to reconsider their preferred future vision for either the school or the local area. Possible questions include:

- What things can you see there?
- · What are people doing?
- How are they acting?
- · What does the natural environment look like?
- How do you feel in this future?
- Can you see any buildings?
- · What smells can you identify?

Encourage students to creatively express their future vision in their preferred mediums — for example, diagram, picture, song, dramatic presentation, story, oral report, role-play, electronic presentation or diary.

Ask students to consider what their future vision might be like with/without water. Use the questions above to encourage students to reflect on and predict possible consequences for their future vision and its systems if water is not available.

#### Assessment

This activity provides opportunities to gather evidence of demonstrations of PS 2.5.

# **Observation checklist**

**Resource 1** 

Student:				
Criteria	Date	Date	Date	Code/Comments
TCC 2.3 Students cooperativ	elv evalua	te how ne	ople have	contributed to changes in the local environment.
Demonstrates ability to take turns	.,	po	<b>Sp.</b> 0 4	The state of the s
Listens to other class members' views				
<ul> <li>Respects others' views</li> </ul>				
Contributes ideas to discussion				
<ul> <li>Is able to make a clear link between a contribution and a resultant change</li> </ul>				
Is able to assess if a contribution results in positive or negative change				
PS 2.2 Students predict pos	ssible cons	sequences	s for an eco	ological system when an element is affected.
<ul> <li>Is able to make an accurate prediction of cause and effect</li> </ul>				
Is able to identify how an element is affected				
PS 2.3 Students cooperativ	ely plan ar	nd care fo	r a familiar	place by identifying needs of that place.
Uses cooperative work skills				
Is able to clearly identify needs of care for a place				
Can suggest logical ways to care for a place				
<ul> <li>Individual/group — can develop a clear plan</li> </ul>				
continuities.	preferred f	uture visi	on for a fan	niliar place based on observed evidence of changes and
<ul> <li>Is able to identify changes and continuities based on observed evidence</li> </ul>				
<ul> <li>Is able to use understandings of changes and continuities to develop a preferred future vision</li> </ul>				
Is able to express the vision through a chosen medium				
strategies.	the origin	s and pro	cessing of	a familiar product to describe relevant conservation
<ul> <li>Is able to identify appropriate sources of information</li> </ul>				
<ul> <li>Is able to accurately identify origins and processing of a product</li> </ul>				
Is able to apply understandings of origins and processing to suggest relevant conservation strategies				
Code:	outords the	loornin-	outoeme	D. has demonstrated the learning systems
W/T — is working t	owards the	e learning	outcome	D — has demonstrated the learning outcome

# Sample questionnaire format

**Resource 2** 

This is an example only and may need to be modified to suit student needs. Words such as access and conservation need to be understood before students conduct the interview. Data-gathering methods for questionnaires/surveys are suggested in Activities 1, 2, 3, 6, 8 and 10. The following sample is applicable to Activity 3, 'What if ...?'.

Name: Date:					
My interview of about v	vater use in the past.				
Q. 1: Where did you live when you were my age?					
Did you have easy access to water? Why/Why not?					
Q. 2: When you were my age, did you play with water?					
What games did you play?					
Q. 3: How did you parents use water in the home?					
Q. 4: Were sprinklers and hoses used outdoors? What were they used for?					
Q. 5: Were water meters and water timers used when you	were young?				
If not, how did you know how much water you were using?					
Q. 6: Did people talk about water conservation when you w	ere young?				
Why do you think they did/didn't?					
Q. 7: What do you know about water conservation today the you were young?	·				

## Drip, drop, splash!

Resource 3

To assist students to read this story independently, cut each paragraph out and paste it onto card.

Jessica woke up and turned off the alarm clock. She walked sleepily into the bathroom. After her shower she headed for the kitchen. Grandad was sipping his cup of tea. "You'd better hurry Jessica — have some cereal, then rinse your plate and don't forget to put your lunch in your bag. Oh, and make sure you brush your teeth and wash your hands before you leave."

As Jessica cycled to school she passed Mrs Potts who was hosing her garden. "Hi Jessica!" called Mrs Potts. Jessica waved and rode towards the river.

Jessica could hear the splash of the fish as they leapt out of the river. She noticed two of her grandfather's friends fishing from the river bank. "I hope you catch some fish. There are a lot of them splashing about today. Good luck!" "Thanks!" they yelled.

Jessica met her friend Michael at the gate. They walked into the schoolgrounds, parked their bikes and quickly ran to the taps for a drink before heading to their classes.

Jessica suddenly remembered that today was the day for the class swimming lesson. Phew, her swimming togs were in her bag. Grabbing her swimming bag, Jessica waved goodbye to Michael and ran to join her class ready to start the school day.

## Support materials and references

Baker, J. 1991, *Window*, Julia McRae Books, London. (The companion guide *Windows* — an *Australian Outlook* is also available. It explores attitudes towards environmental issues.)

Baker, J. 1995, The Story of Rosy Dock, Random House Australia, Milsons Point, NSW.

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## Kits (including audiovisual)

Department of Primary Industries 1992, *Catchment Care Education Kit,* Department of Primary Industries, Brisbane.

Department of Natural Resources 1995, Whizzy's Incredible Journey, Brisbane.

Queensland Department of Environment and Heritage 1991, Reduce, Reuse and Recycle: A Source Book — Preschool to Year 3, Brisbane.

## Websites

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

Environment Australia. www.erin.gov.au/

Queensland School Curriculum Council. www.qscc.qld.edu.au/kla/sose/research\_papers.html

Waterwatch. www.waterwatch.org.au/

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

ISBN 0 7345 2269 X

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