

Rusty
Loses His

Loop



Educational Booklet
for teachers, parents and care-givers

Acknowledgments

The River Murray Urban Users Committee Inc. thanks the Ngarrindjeri Heritage Committee Inc. for permission to use the name Ngori. This word is the Ngarrindjeri people's word for pelican.

Thanks also to Margaret Calder for input on activities and SACSA profiles and SASOSE for permission to use of the Zeotrope activity from the early childhood wetlands unit of *Our Natural Heritage*.

This teacher booklet has been researched, written, designed and illustrated by Ecocreative, creators of *Rusty Loses His Loop*.

Visit www.ecocreative.com.au to find out more about their services for the environment and education sectors.



Introduction

The central theme of *Rusty Loses His Loop* concerns the use of water and the impact this has on the natural environment of the Coorong and River Murray. This booklet is linked to the *South Australian Curriculum Standards and Accountability Framework* (SACSA) and is primarily intended to assist in the teaching of Society and Environment (Reception-Year 2 Band) and Understanding our World (Age 3-5 Band), with a focus on the topic of water conservation. *Rusty Loses His Loop* can also provide a starting point for a module of work that is integrated across the curriculum. To assist with this approach, the activities in this booklet (while falling under the umbrella Learning Area of Society and Environment) are categorised under the additional Learning Areas of Arts, Design and Technology, English, Health and Physical Education, Languages, Mathematics, Science, Society and Environment.

Rusty Loses His Loop presents children with the opportunity to explore an important and topical environmental issue for South Australia—the declining health of the River Murray and Coorong. The activities in this booklet aim to further explore this issue and other related issues. Several of the activities also provide opportunities for children to engage in problem-solving and working toward making a positive difference to the environment. Grappling with some of the big issues can help children to feel important and purposeful, giving them a stronger sense of their place in the world.

To promote a strong engagement with the following unit of work, it is vital that the children understand that the Coorong and the River Murray are actual places and that the issues concerning these natural environments are real.

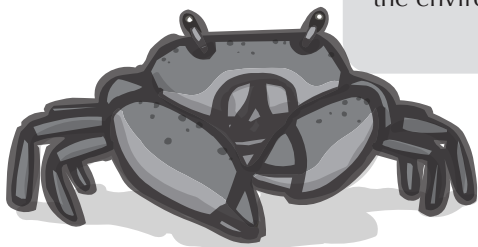
It is vital that the children understand that the Coorong and the River Murray are actual places and that the issues are real.

While the activities in this booklet are not presented in a suggested order of execution, it is recommended that teachers begin with the activity 'Exploring the setting' (English).

For parents and care-givers

Many of the 'classroom' activities in this booklet can be adapted for around the home. Parents or care-givers can work together with children to brainstorm and then implement water-saving strategies.

There are also many benefits in time spent outdoors as a family engaged in activities such as camping, gardening and bush walking. These leisure activities help to foster in children a love and appreciation of nature. This provides the best motivation for children to respect and care for the environment



A few quick facts

Worms

Polychaete worms (pronounced “pollykeet”) are the major food for Stints and many other species at the Coorong mudflats. In addition to increased salinity, raised water levels and sand from the blocked Murray Mouth is smothering the mudflats and making it hard for birds to forage. Search the internet for more on polychaetes.

Pelicans

Ngori (the “Ng” is pronounced as the “ng” in “sing”) is the Ngarrindjeri word for Pelican. Due to the serious salinity problem in the Coorong and its effect on the availability of food, Pelicans have not bred since 2002. There are no records of this ever happening before.

The Coorong

The Coorong and Lakes Alexandrina and Albert are listed as a Wetland of International Significance under the Ramsar Convention. Its status as one of the world’s most important sites for waterbirds is threatened by the lack of River Murray ‘environmental flows’ and other water quality issues. In the absence of ‘environmental flows’, the Murray Mouth is only kept open by dredging (see *Resources* for more information).

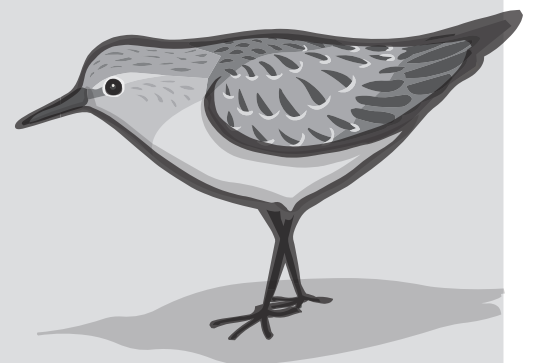
Red-necked Stints

Eleven things you may not know about the Red-necked Stint (scientific name *Calidris ruficollis*).

1. Red-necked Stints fly 25,000-30,000 km in their migration. In their lifetime, this equates to the distance from Earth to the moon—and back!
2. Stints breed in Siberia and other locations in the Arctic Circle and ‘over-winter’ in the southern hemisphere (though they especially like Australia).
3. Adult Stints leave hatchlings to fend for themselves (and follow them across the world) once the chicks are two-weeks-old.
4. Stints are the smallest of all migratory waders (small enough to fit in a wine glass).
5. Stints weigh only 30 grams when they leave Siberia. Once they arrive at the Coorong, they start fattening up for the flight home. Healthy birds will increase their weight by 50% and use these fat reserves (which, unlike humans, they can instantly convert to energy) on the journey back.

6. Stints eat insects in Siberia and polychaete worms on the mudflats of the Coorong.
7. Stints can only forage for worms at shallow depths (their legs and beak are not long enough for deeper water).
8. Stints are very energetic birds and often, unlike Rusty, travel in large flocks made up of other birds as well.
9. Plumage changes from flecked brown in the Siberian tundra (where it is good camouflage from foxes) to predominantly grey in Australia.
10. Coorong Red-necked Stint numbers are estimated to have dropped to 10% of previous populations.
11. Red-necked Stints are creatures of habit. They like to return to exactly the same place year after year. Some other migratory waders are not so fussy.

Visit the websites listed in *Resources* for more detail on the amazing journeys of Stints and other migratory birds.



Unit Plan

Accountability and assessment

The current curriculum framework for South Australia is the *South Australian Curriculum Standards and Accountability Framework* (SACSA). While the following activities fit this framework, they are suitable for use with other curriculum frameworks. The activities in this booklet are primarily concerned with the Society and Environment Learning Area (as outlined in SACSA).

Please note that the references to SACSA in this booklet are intended only as a starting point. Refer to www.sacsa.sa.edu.au for information related to other aspects of assessment and accountability, such as Developmental Learning Outcomes and Essential Learnings.

Methods of assessment that would be relevant to this unit of work (and to the age group) could include: observations and anecdotal records, skills checklists, children's learning statements, portfolios of work samples (dated), photographs and video.

Themes

The central themes for this unit of work are:

- water conservation
- ecosystems
- habitat
- natural resources.

Unit duration

The time-frame required to complete a unit of work on *Rusty Loses His Loop* is flexible. The number of activities can be chosen to suit the teacher's schedule and the needs and interests of the children. The activities outlined for this unit plan need not be followed in any particular sequence. These activities are designed for teachers to use for a unit that lasts anything from a week to a term. For a shorter unit, teachers can select activities that are most compatible with the interests of their students and use these as the basis for their work. *(If using Rusty Loses His Loop as a unit plan for several weeks or a whole term, please refer to the Resources section in this booklet for links to materials related to the themes of this unit.)*

Learning areas

While the overarching curriculum focus for this unit of work is the Society and Environment Learning Area (Primary Schools) and Understanding Our World (Preschool), this booklet provides activities for all the Learning Areas to allow teachers the flexibility of conducting a unit of work that is integrated across the curriculum, or focusing on particular Learning Areas as directed by children's interests and needs.

■ Please note

The Key Ideas used here are taken directly from the SACSA framework, while the Learning Outcomes have been written especially for this unit of work

Bands

The activities are aimed at both Reception–Year 2 and Age 3–Age 5 bands. For use in Preschools, modifications have been made to some of the activities.

Extension

Rusty Loses His Loop (and this accompanying booklet) provide opportunities for children to consider themes additional to those outlined above. After evaluating children's engagement in various aspects of this unit of work, teachers may choose to follow-on with a unit of work centred around one of the following themes:

- Australian wildlife
- the Ngarrindjeri people.
- bush foods (bush tucker)
- migratory birds
- mapping
- refugees.

Bands: Reception - Year 2

■ Focus Learning Area for the unit: Society and Environment

The Key Ideas and Learning Outcomes for the Society and Environment Learning Area provide an umbrella for all the activities that follow. The activities are listed under other relevant curriculum areas, however, to facilitate an integrated unit of work, the overarching themes and concepts of this unit of work are centred on the Society and Environment Learning Area.

Strand: Place, space and environment

Key Idea: Children develop and show their understandings of the significance of places and resources. They examine different ways in which places and resources are used to satisfy needs and wants. [Id] [In] [KC1] [KC6]

Learning outcomes

Children:

- have an understanding that water is essential for all living things including humans
- understand that some plants and animals need saltwater environments and others need freshwater environments to survive
- demonstrate knowledge of a variety of ways in which people use water and ways in which water usage can be reduced.

Key Idea: Children develop an understanding of the concepts of sustainability, conservation and care of resources and places, and take action consistent with these. They assess the ways in which values affect behaviour. [F] [In] [T] [KC1] [KC6]

Learning outcomes

Children:

- begin to understand some concepts regarding ecosystems, such as the basic needs of living things
- recognise that their values about conserving natural resources can provide the foundation for positive action.
- understand the process of salinity, some of its effects on the environment (e.g. plants and animals becoming sick and sometimes dying).

Key Idea: Children develop skills to represent real and virtual place and space as they discuss Interactions between people and environments. [C] [KC2]

Learning outcomes

Children:

- understand the concept of a bird's-eye-view and can recognise this perspective in illustrations and photographs
- depict a scene using a bird's-eye-view
- depict a habitat in both 2D and 3D forms.

Bands: Age 3 - Age 5

Focus Learning Area for the unit: Understanding Our World

Key Idea: Children develop a sense of responsibility for natural and social environments and an understanding that their world is shared.

[F] [In] [KC1]

Learning outcomes

Children:

- have an understanding that water is essential for all living things including humans
- understand that some plants and animals need saltwater environments and others need freshwater environments to survive
- demonstrate knowledge of a variety of ways in which people use water and ways in which water usage can be reduced
- begin to understand some concepts regarding ecosystems, such as the basic needs of living things
- understand the process of salinity, some of its effects on the environment (e.g. plants and animals becoming sick and sometimes dying).

Key Idea: Children develop and use mathematical skills and understandings to investigate their physical and social worlds, both natural and constructed. [In] [T] [KC1] [KC5]

Learning outcomes

Children:

- identify features on maps and globes of the world
- participate in collecting and analysing data.

■ Please note

Learning Outcomes for both Bands have been provided only for the umbrella learning area Society and Environment. Learning Outcomes for the other curriculum areas can be devised by teachers as required.

Arts

■ Arts (Reception – Year 2)

Strand: Arts Practice

Key Idea: Children identify a range of concepts for each arts form, explore new arts skills, and experiment with a range of traditional and emerging techniques and technologies. They begin to understand how these can be used to explore ideas and generate solutions to problems within each arts form. [T] [KC6] [KC7]

Key Idea: Children develop a strong sense of purpose by performing/presenting with others and in teams. They explore relationships between arts works and audiences/viewers within each of the arts forms. [Id] [C] [KC2] [KC4] [KC6]

■ Arts and Creativity (Age 3 - Age 5)

Key Idea: Children explore arts forms including visual arts, drama, music, dance and media through symbolic and creative expression. [Id] [T] [C] [KC2] [KC6]

Activity 1: Posters

Children help to raise awareness in their school and local community by creating and displaying posters about water conservation. This is a good activity for students to work on in small groups.

Preschool: Use a large piece of paper (A3 or larger) to create a mural promoting water conservation to be displayed in the preschool. Children work in small groups on this big group project throughout the course of several sessions.

Activity 2: Performance

Using their modified ending or 'next chapter' for *Rusty Loses His Loop* (see Activity 12), children work in small groups to create plays. They pair-up with another group to share the performances or groups can share with the whole class.

Preschool: Create a Coorong setting in the pretend-play area. Invite children to help with ideas and setting up. Bird wings and beaks could be made from card. Capes could also be used for wings. Blue fabric can be used for water, cushions or straw for nests etc.

Activity 3: Big book

Using A3 card (or bigger), the class works together to create a big book of *Rusty Loses His Loop*. The teacher copies the story onto the paper. The children then work in small groups or pairs on a page, painting the scene. The book is then assembled and read to the class. The big book can then be put on display for children to access during reading time. The big book can also be shared with another class or parents and care-givers.

Preschool: Children work on a page in small groups with the support of a teacher or parent helper throughout several sessions.

Activity 4: Sculpture

Using clay, play dough or pipecleaners, students create Australian animals using the characters and illustrations in *Rusty Loses His Loop* for inspiration. Children experiment with various techniques and tools. The children's work can be documented with photographs. Aspects of clay and dough work can be difficult, such as joining body parts. It would be beneficial for children to debrief in small groups or as a class following this activity. What was difficult, what worked well? etc.

Design, technology

■ Design and Technology (Reception - Year 2)

Strand: Designing

Key Idea: Children recognise and use different ways of thinking, planning and preparing that are helpful in achieving and presenting their designs. They learn that by designing it is possible to effect change.

[F] [T] [C] [KC1] [KC2] [KC3]

Strand: Making

Key Idea: Children develop confidence in their capacity to use materials and equipment to make products, processes and systems and, in so doing, reflect on how they work.

[T] [KC1] [KC6] [KC7]

Strand: Critiqueing

Key Idea: Children develop understandings about people, diversity and the technological world, and learn to question by assessing their own and others' products, processes and systems.

[T] [KC1]

■ Design and Technology (Age 3 – Age 5)

Key Idea: Children examine, identify and critique processes, products and systems.

[In] [T] [C] [KC1]

Key Idea: Children use their imagination to generate ideas and participate in the processes of design.

[F] [T] [C] [KC3] [KC6]

Key idea: Children use materials, equipment and processes to design and develop products and systems.

[In] [T] [C] [KC3] [KC7]

Activity 5: Habitats

Create habitat for a Red-necked Stint. Using the worksheet provided in this booklet (page 12), children draw a habitat around Rusty.

Encourage children to consider the basic needs of animals (e.g. water, food, shelter).

Children can then construct a 3D habitat for Rusty and other Coorong birds using boxes and other scrap materials.

Activity 6: Weaving

1. Tell the children about the Ngarrindjeri tradition of weaving using Coorong water plants. Photos of this craft can be found at the Camp Coorong website (see *Resources* details).

2. Students practise simple weaving using Brennex squares (coloured squares of paper).

3. Using natural materials (from the school yard or gardens of members of the school community) experiment with weaving technique. Common water-loving (riparian) plants that lend themselves to weaving are rushes such as Pale Rush (*Juncus pallidus* or other *Juncus* species), sedges such as flat-sedges (*Cyperus vaginatus*), reeds such as the Common Reed (*Phragmites australis*) or Bulrushes (*Typha domingensis*). These species are found along most watercourses in

urban and rural South Australia (consult the Internet for images of the plants using the species name).

Activity 7: Papier mache world globes

Students create globes using papier mache*. Children draw or paint on the globes to signify land forms and water. With teacher assistance, children label Australia and Siberia. Students then create Rusty choosing from a range of materials such as plasticine and scrap materials (boxes, cylinders, lids etc) and craft materials (e.g. pipecleaners) and attach Rusty to the globe (again choosing from a range of materials such as string, tape or glue).

Preschool: Create a papier mache globe as a whole group. Children create their own 'Rusty' to hang near the globe.

*An alternative to papier mache globes would be to use foam craft balls.

Activity 8: Create a zootrope

Work through the instructions provided in the Zootrope worksheet on page 16 of this booklet (first demonstrating how the finished product works). It is likely this activity will need to be teacher-assisted.

Language

■ English (Reception – Year 2)

Key Idea: Children recognise the range of experiences and views shared by people as they read, view and critically interpret different visual and written texts containing familiar and new content, language and text structures. [T] [KC1]

Key Idea: Children discuss reactions, and identify main ideas and information, when listening to a range of texts. With an awareness of purpose, they produce a range of spoken texts in order to communicate their ideas and feelings to a familiar audience. [Id] [T] [C] [KC2]

Key Idea: Children recognise some of the purposes and advantages of writing as they express feelings, ideas, information and imagination within written texts. [T] [C] [KC1] [KC2]

■ Communication and language (Age 3 – Age 5)

Key Idea: Children are purposeful and effective users of communication and language. [Id] [C] [KC2]

Key Idea: Children increase their understanding of the power and complexity of language and communication. [T] [C] [KC2]

Activity 9: Exploring the setting

Familiarise children with the setting of *Rusty Loses His Loop* by showing them reference materials related to the River Murray and the Coorong. These may include photographs, reference books, video footage and websites (see the *Resources* section in this booklet for some ideas).

Activity 10: Brainstorming

The ending of *Rusty Loses His Loop* is intended to be the opening point for class discussion. Ask the children questions such as:

- What might happen when Rusty goes back to the Coorong next year?
- What needs to change so that Rusty can keep staying at the Coorong?

Help the children identify the main problem—not enough fresh water. Lead the class discussion towards positive solutions. Have the children brainstorm ideas for conserving water. Write these ideas on large pieces of card or paper or on the white board.

Children then write and draw some of their ideas for conserving water.

Activity 11: Storyboarding

Using the storyboard provided in this booklet (page 13), children draw the main events in *Rusty Loses His Loop* in sequence. This is a good activity to do early-on because it can help to establish children's understanding of the book and the issues it presents.

Preschool: Draw a storyboard on the white board or on a large piece of paper as a whole-class activity. Make storyboard worksheets available to children on the writing table.

Activity 12: Write a new ending

The ending of *Rusty* is sad, though not without hope. Discuss:

- What the Coorong might look like if more water flowed down the River Murray?
- What must change to allow this to happen?

Write the children's ideas on the whiteboard. Children then write and illustrate a new ending for the story.

Preschool: Talk about different endings for the story as a group.

Health, physical education

■ Health and Physical Education (Reception – Year 2)

Strand: Physical activity and participation

Key Idea: Children investigate a range of movement options and participate regularly in energetic physical activity to enhance their physical vitality and assist the process of healthy growth, development and learning. [Id] [T] [KC1]

Strand: Personal and social development

Key Idea: Children recognise differences and similarities between themselves and others as they share with, and contribute to, the different groups in their expanding world. [Id] [In] [KC1] [KC2] [KC4]

■ Health and Physical Education (Age 3 – Age 5)

Key Idea: Children extend their range of physical skills and strengthen their physical vitality. [Id]

Key Idea: Children develop understandings about their physical capabilities through individual and shared activities. [Id] [In] [KC1] [KC4]

■ Self and Social development (Age 3 – Age 5)

Key Idea: Children extend their sense of personal and group identity. [Id] [In]

Activity 13: Movement of Red-necked Stints

Students experiment with ways of physically depicting the movements of Rusty: diving, spinning, darting and looping.

Once the children have practised their movements they can then move (as Red-necked Stints) to music. Use a range of music with different tempos to encourage children to practise moving in time with the music. Experiment with stopping the music and getting children to ‘freeze’. *The River Murray Musical*—available from MurrayCare—is a good starting point (see Resources).

Children can also explore the movement of other animals in Rusty, such as polychaete worms, crabs, pelicans and dragonflies.

Activity 14: Reflections on nature

Students speak about their experiences of nature*.

Encourage children to speak about a natural setting that is special to them—the beach, a family camping spot, a grandparent’s garden. Some children may have experiences of visiting the Coorong or other places along the River Murray.

This activity could be done during group time. Stick to two speakers per sitting, with the rest of the group given the opportunity to ask questions at the end of the talk. Children could put their name on a roster covering one or two weeks. They may want to bring in books, photos or objects from nature to add to their presentation.

*For students who are not yet ready to talk in front of a large group, provide an opportunity for them to share their experience of a special place in nature in a smaller group, or to write or draw about it.

Mathematics

■ Mathematics (Reception – Year 2)

Strand: exploring, analysing and modelling data

Key Idea: Children generate data about the world around them. They develop strategies, including using technology, to collect, organise and represent data, and use it to describe situations and to make decisions and personal plans. [Id] [T] [C] [KC1] [KC3] [KC6] [KC7]

Strand: spatial sense and geometric reasoning

Key Idea: Children explore and experiment with simple transformations to predict and change the orientation and position of figures and objects in their daily activities. [In] [C] [KC6]
Key Idea: Children explain ways of representing themselves and familiar locations in spatial terms, and begin to think in geometric ways. [Id] [T] [C] [KC2]

■ Understanding Our World (Age 3 – Age 5)

Key Idea: Children develop and use mathematical skills and understandings to investigate their physical and social worlds, both natural and constructed. [In] [T] [KC1] [KC5]

Activity 16: Collecting data

Over 12 hours, children record how many times they use water and what they use it for (e.g. flushing the toilet, drinking, cooking, bathing). Encourage children to discuss some of their findings with the class.

This information can then be put into a class table or all the results can be added to find out how many times the class used water in a 12-hour period.

Extend children's knowledge by discussing less obvious uses of water, such as the water used to help grow the foods that we eat. Refer to the *School Water Audit Kit* in *Resources* for more information.

Preschool: This activity could be done on a weekend with parent/care-giver support.

Activity 17: Bird's-eye-view

1. Look at some of the pictures in *Rusty Loses His Loop* that illustrate a bird's-eye-view. Ask children to then draw or paint a picture of their own home or their school using a bird's-eye-view.

2. Children cut photographs and illustrations out of magazines that depict a bird's-eye view. These pictures can then be used to make a collage (individual or whole-class).

3. Using the worksheet on page 15 of this booklet, children match the objects shown in bird's-eye-view with the same object shown from a side perspective.

Preschool: Provide photos and illustrations of bird's-eye-views for a collage table. Children could also stick pictures of birds onto their collage. Draw a simple version of the worksheet (or draw other objects) on the white board and match the bird's-eye-view with the side view as a whole class. Make the worksheets available on the writing table.

Activity 18: Mapping

Using maps, atlases and Google Earth, support children to locate Australia, South Australia, the River Murray and the Coorong. A map of the Coorong has been provided at the back of this booklet (page 20). Children could start by colouring-in these maps. Help to reinforce the mapping concepts of land and water with colour-coding.

This activity can be extended by mapping Rusty's journey from Siberia to Australia and back again. See *Resources* for website links to migratory birds and representations of the East Asian Flyway (the route many migratory birds travel every year).

Science

■ Science (Reception – Year 2)

Strand: life systems

Key Idea: Children investigate the features and behaviours of plants and animals through direct and virtual experience. They explain, and share with others, their understandings of the connections between living things, and between themselves and natural environments. [In] [T] [KC1] [KC2]

Strand: Earth and space

Key Idea: Children collect, organise and share information online and offline about the aspects of their personal world that enable them and their family to live. [Id] [T] [C] [KC1] [KC2]

■ Understanding Our World (Age 3 – Age 5)

Key Idea: Children develop confidence through making sense of their world by thinking, acting and working scientifically. [Id] [In] [T] [KC6]

Activity 19: Every drop counts

Using the Every Drop Counts worksheet (page 13), children record three ways in which they use water at school and three ways in which they use water at home. The results can then be cut out and displayed around the classroom. The combined effect of these many drops will help to convey that every person's positive actions can contribute to the solution.

Activity 20: Salinity experiment

Have two plants in the classroom of the same species* that are of similar size. Water one plant with fresh water, the other with salty water. Children observe and record changes. The one watered with salty water will soon start to look sick and die. Link this to what is happening to the plants at the Coorong. Show the children the illustrations of the dying tree in several scenes of *Rusty Loses His Loop*.

*Punnets of herb or vegetable seedlings, such as basil or lettuce are inexpensive and especially well-suited to this experiment. Use of these plants will also reinforce the effect of salinity on food plants.

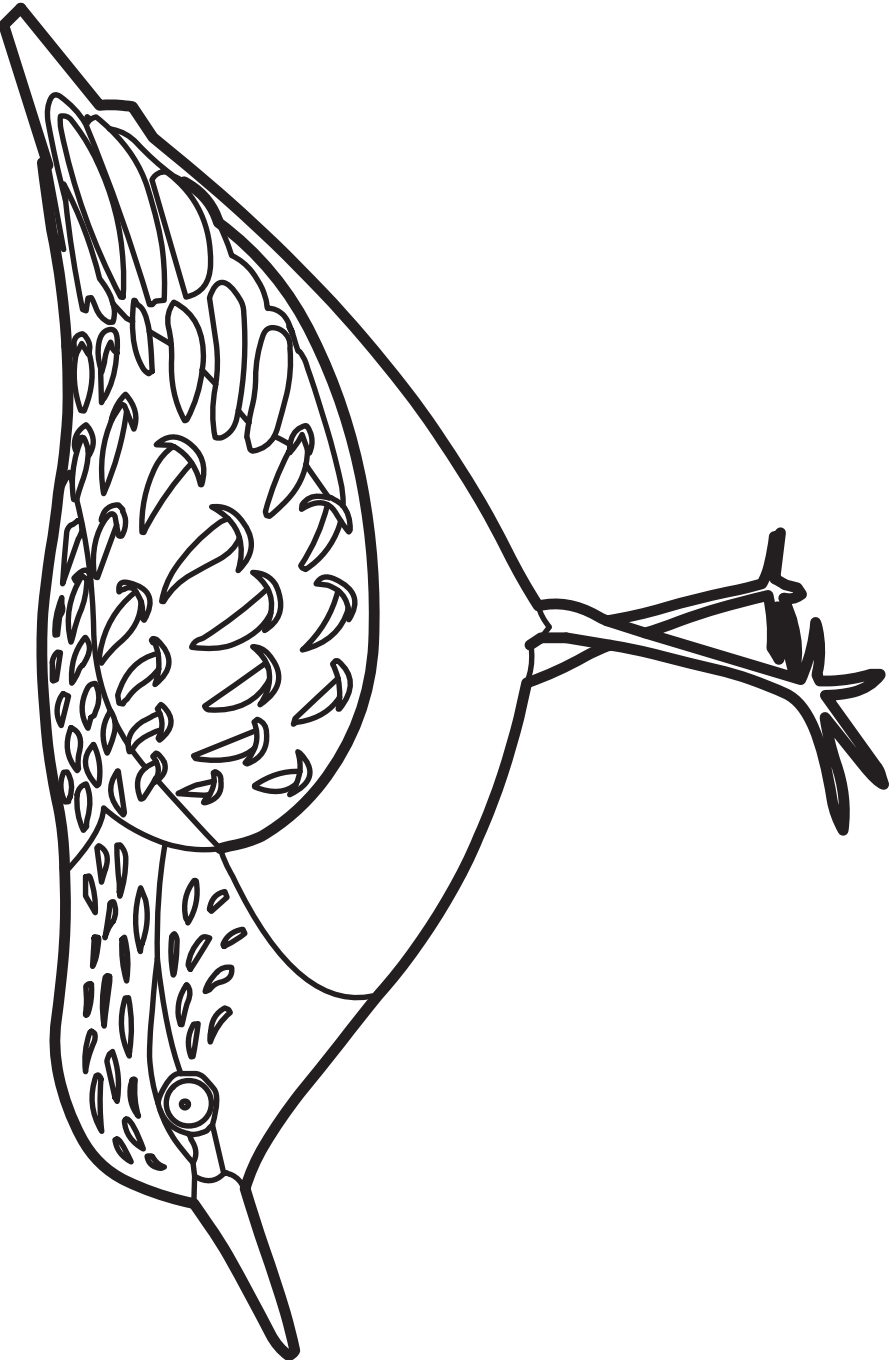
Activity 21: Ngarrindjeri names

The pelican in *Rusty Loses His Loop* is named after the Ngarrindjeri word for pelican: Ngori. Ngarrindjeri is an ancient Indigenous language and some of the names for animals, such as "Ngori" are derived from the sounds the animals make.

1. Practise saying and writing the word Ngori with the class. Get children to think of other Australian animals and make predictions about their Ngarrindjeri names based on the sounds that the animals make. On a large piece of paper paste or draw a picture of the animal and write children's predictions underneath. Encourage children to help invent the spelling for some of their words.

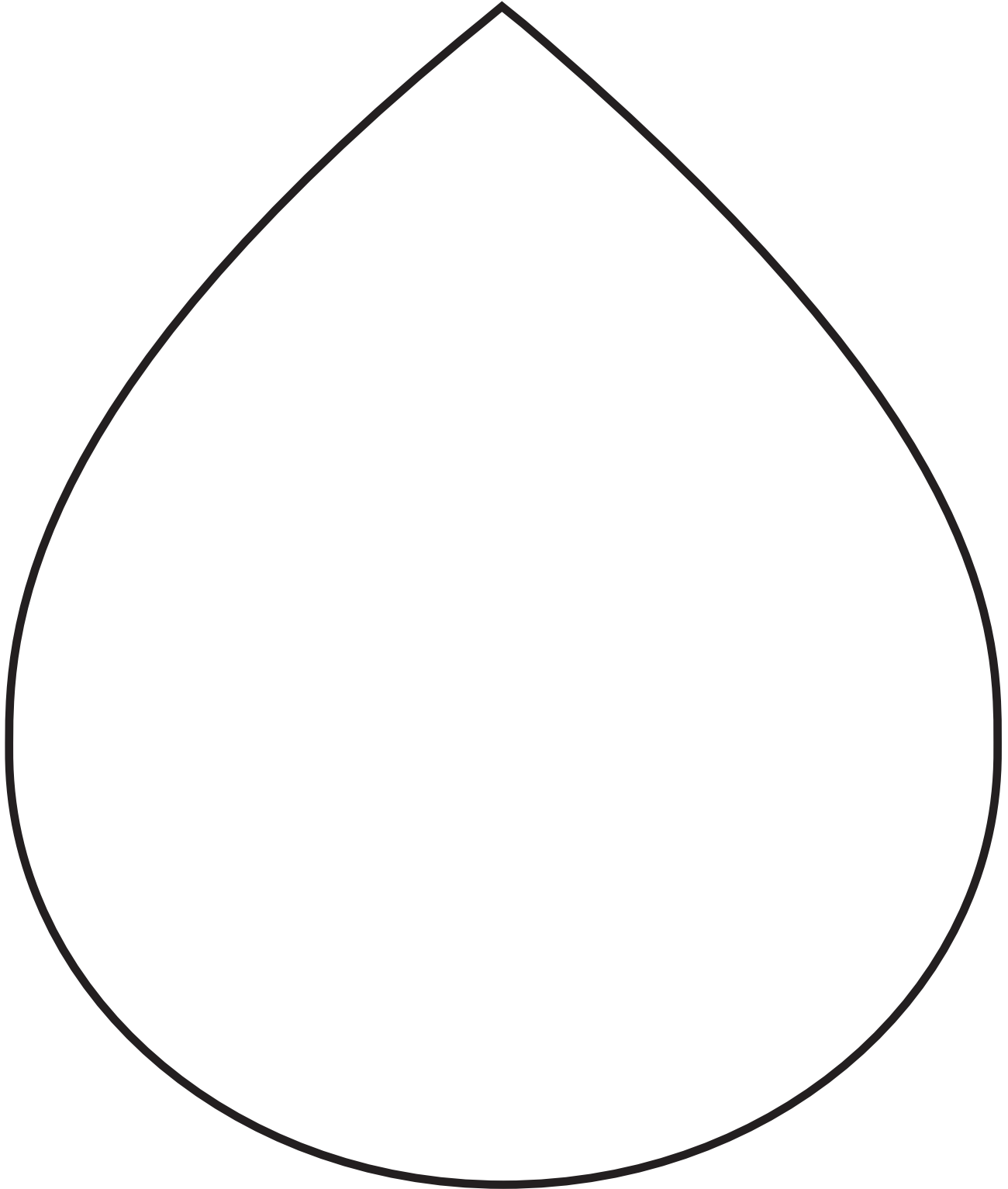
2. Research the Ngarrindjeri names for the animals (contact Camp Coorong or Tandanya for assistance, see *Resources*). Compare these results with children's predictions. Children then choose their favourite Australian animal to illustrate and title with the Ngarrindjeri name. Encourage children to write in large letters. Display children's work in the classroom or somewhere else in the school. Write a description of the activity and the meaning of the Ngarrindjeri names to accompany the display.

Draw a healthy habitat for Rusty



Every drop counts

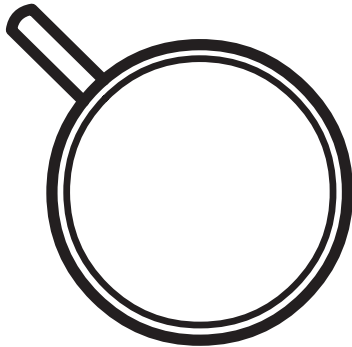
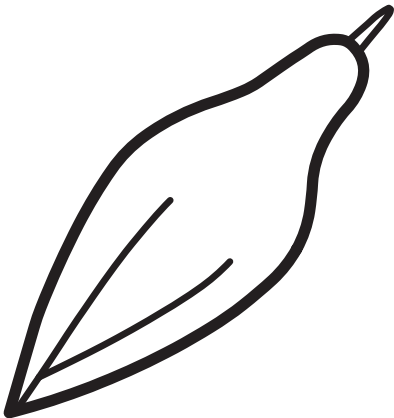
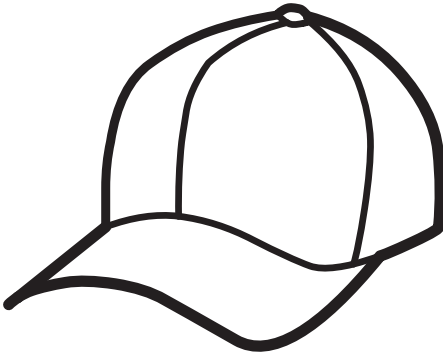
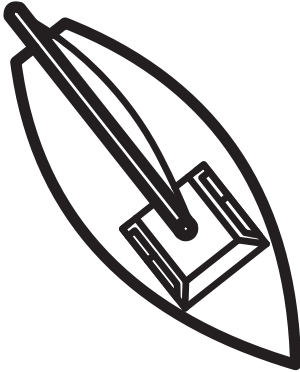
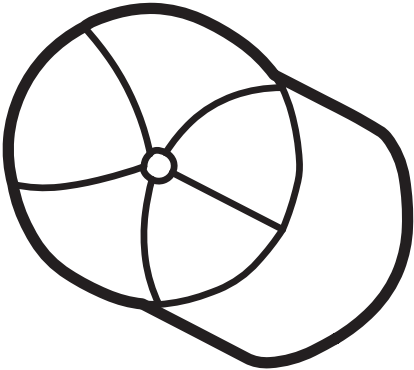
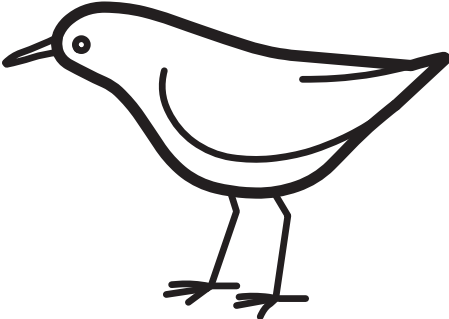
Three things I can do to save water at _____.



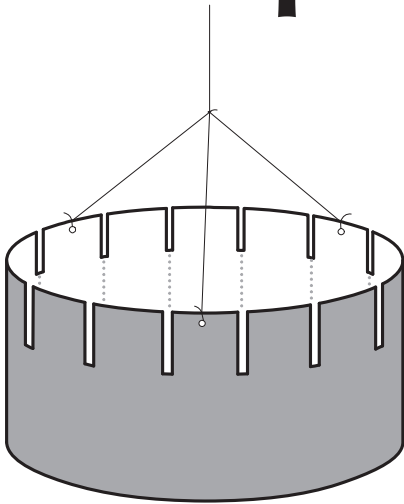
_____ 's storyboard

A storyboard template consisting of six empty rectangular panels arranged in a 3x2 grid. Each panel is connected to its neighbors by thin black lines: a vertical line between the top and middle panels in each column, a vertical line between the middle and bottom panels in each column, and a horizontal line between the two panels in each row.

Bird's-eye view

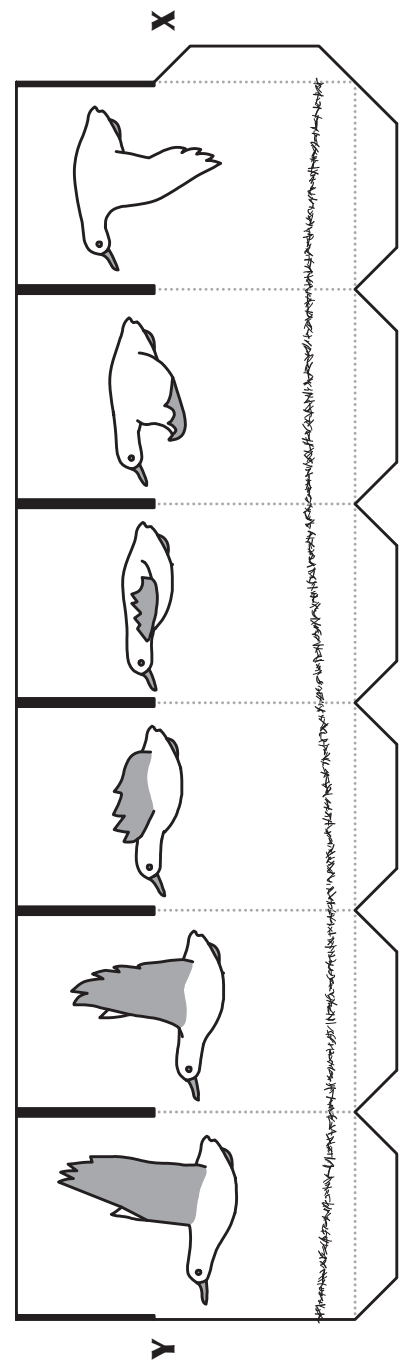


Zeotrope



Make your own zeotrope*

1. Enlarge the adjacent strips to A3 using a photocopier.
2. Cut out the two 'flying stint' strips
3. Stick black paper onto the back
4. Cut out the black slots (and backing paper).
5. Join the strips together (X to X, Y to Y).
6. With pictures facing inwards, make a cylinder (for a strong structure, make sure to stick the cylinder around a 15cm circular base).
7. Attach some thin, strong thread (nylon fishing line is good) and suspend the cylinder at eye level.
8. Twirl the cylinder around
9. Watch the wing flaps though the slits!



*For many students, this will need to be an assisted activity. This may be best suited to classroom decoration to support the Rusty unit of activities.

Source: Adapted from 'Wetland Wonderlands' R-2 unit from *Our Natural Heritage*, SASOSE.

Resources

Organisations and publications/kits etc

River Murray Urban Users Committee Inc. (MurrayCare™)

PO Box 3165 Rundle Mall Adelaide SA 5000

Telephone: (08) 8204 9100

Facsimile: (08) 8266 0584

Email: admin@murrayusers.sa.gov.au

Web: www.murrayusers.sa.gov.au

- *Rusty Loses His Loop* (see also www.murrayusers.sa.gov.au/rusty)
- *WaterWise in the Community* information sheets
- *School Water Audit Kit*, RMUUC (contact for song tips)
- *Estuaries Education Kit*, CCSA (secondary education resource, good background material)
- *Mighty Murray Musical*
- MurrayLink folder
- *A Walk Around the Murray* – River Murray excursion planning booklet
- Poster sets
- River Murray issue fact sheet set
- River Exhibition fact sheet set

Catchment Care & Waterwatch (Lower Murray SA)

SA MDB NRM Board

PO Box 2343 Murray Bridge SA 5253

Telephone: 8532 3573

Facsimile: 8531 1843

Email: glundstorm@rivermurray.sa.gov.au

Web: www.samdbnrm.sa.gov.au

Camp Coorong (Ngarrindjeri cultural centre)

PO Box 126 Meningie SA 5264

Telephone: (08) 8575 1557

Facsimile (08) 8575 1448

Email: nlpa@bigpond.com.au

Web: <http://peaceliberation.tripod.com/pages/nlpaWebPage/>

Department of Water, Land and Biodiversity Conservation (DWLBC)

GPO Box 2834 Adelaide SA 5001

Telephone: (08) 8463 6800

Web: www.dwlbc.sa.gov.au

Global Education Centre (free loan system for members)

1st Floor Torrens Building 220 Victoria Square Adelaide SA 5000

Telephone: (08) 8221 6744

Facsimile: (08) 8221 6755

Email: gecsa@global-education.asn.au

Web: www.global-education.asn.au

- River Murray class resource kit
- *School Water Audit*
- *Mighty Murray Musical*
- *Walk Around the Murray* – River Murray excursion planning booklet
- Contact this organisation for details on how you may borrow *Watercare 1: A curriculum resource for schools* (R-4), DENR (various worksheets, resource sheets etc) or *Watercare 2*. There is also an early years Wetland Wonderlands (R-2 unit) , in *Our Natural Heritage*, SASOSE (out of print).

Murray-Darling Basin Commission

(posters, fact sheets, maps, bookmarks, stickers, brochures, postcards)

15 Moore Street Canberra ACT 2601

Telephone: (02) 6279 0100

Facsimile: (02) 6248 8053

Email: info@mdbc.gov.au

Web: www.mdbc.gov.au

Tandanya

(National Aboriginal Cultural Institute)

253 Grenfell Street Adelaide SA 5000

Telephone: (08) 8224 3200

Facsimile: (08) 8224 3250

Email: tandanya@tandanya.com.au

Web: www.tandanya.com.au

Websites about birds and worms

- **Shorebird migration**

www.deh.gov.au/biodiversity/migratory/waterbirds

Download or order the Shorebird Migration poster from the community information unit.

- **A Year on the Wing**

www.abc.net.au/wing/community/learningflyinfo.htm

This site has plenty of information on a year in the birds' lives and interesting details on each bird species, how birds are tagged and tracked etc. The Education Resources section includes two PDF workbooks that may be of interest.

- **Wader birds off to Siberia**

www.abc.net.au/scribblygum/March2000/default.htm

- **Polychaete worms**

www.ucmp.berkeley.edu/annelida/polyintro.html

The Coorong

