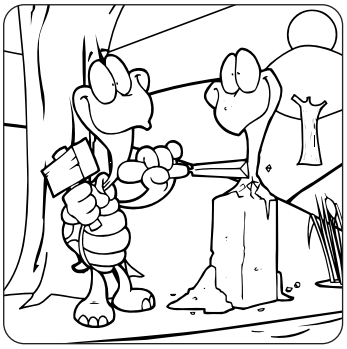
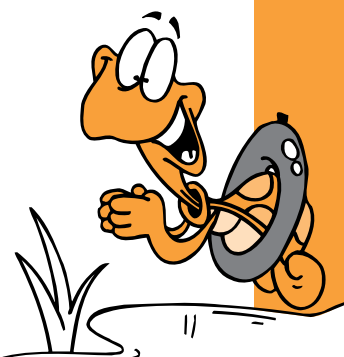


# The Arts - Contents





# Salt Shakers And Movers

I

## FOCUS

- How do we express salinity issues through music?

## OBJECTIVES

- Discuss the musical elements of songs
- Rewrite lyrics to reflect salinity issues

## CSF II LINKS

THE ARTS 4.1 Music
4.2 Music
4.3 Music
4.4 Music

## BACKGROUND

The impacts on a community from salinity can be costly, both economically and socially. Using song to illustrate feelings about salinity can help overcome some of the social salinity impacts. Song lyrics can also help students visualise the impacts of salt.

## NOTES

The learning tasks below are extremely flexible and can be adapted to the particular needs, interests and skills of your students. If music is not your forte, your school's music specialist or a musical-minded community member may be a wonderful resource here.

## LEARNING TASKS

**There are a number of ways in which this activity could run:**

1 **Change the lyrics and sound effects of 'Old Macdonald had a farm' to show the impact of salinity on his farm.**

2 **Sing / play / discuss / study / dramatise 'Rip Rip Woodchip'.**

3 **Experiment with a variety of containers (tins, glass bottles, cardboard boxes etc.) to make saltshakers of differing sounds.**
   - Use them as percussion instruments to accompany songs.

4 **Discuss popular songs and how their lyrics would change if the land they were describing was affected by salinity.**

5 **Look at photos of healthy and salt-affected land. Make a song that describes what students see in the pictures.**

## MATERIALS

- **CD** with John Williamson's 'Rip Rip Woodchip' (available at www.malleeboy.com)
- **Containers**
- **Salt**
- **Popular songs** on CD or tape
- **Photos** of healthy landscapes and discharge areas (see 'Photos' on the CD)

## EXTENSION

Songs or musical creations could be performed for other classes or at an assembly attended by parents and community members.
Challenge: Write a song and dance routine to perform on stage.

## ASSESSMENT

How well did students perform songs or instrumental pieces? Could they improvise and compose and evaluate works to express ideas? Could they describe characteristics of musical works and identify social influences?

# Salty Scales

I

## FOCUS

- How does salt added to water affect its pitch?

## OBJECTIVES

- Experiment with water levels to vary pitch
- Experiment with salt content to vary pitch
- Compose a simple tune to convey mood

## CSF II LINKS

THE ARTS 4.1 Music
4.2 Music
4.3 Music
4.1 Dance

## BACKGROUND

Changing the salt content in a glass of water changes the pitch, in a similar way to changing the water level. The more salt that is added to a glass of water, the denser the solution becomes and the lower the note that is made. Please note though that if the salt is left to settle, the pitch will vary once again. To obtain an accurate indication of pitch, stir each glass vigorously before playing.

## NOTES

Choose from the learning tasks below to accommodate for students prior experience, engagement and musical ability. These activities can be run as a whole class or in small groups. Alternatively, each small group could do a different activity.

## LEARNING TASKS

1 **Experiment with various water levels in glasses to produce a range of pitches.**
   - Challenge students to use a keyboard and match pitches with notes, labelling glasses accordingly.

2 **Begin with equal water levels in glasses and experiment with various salt concentrations to produce a range of pitches.**
   - Try 1/2 teaspoon, 2, 4, 6, & 8 teaspoons
   - Challenge students to use a keyboard and match pitches with particular notes, labelling glasses accordingly.
   - It is important to use a consistent measure and record the volume added.
   - Is there a pattern e.g. does one teaspoon = one note?

3 **Select a mental image or visual scene from photos available and compose a short piece of mood music to bring the scene to life.**
   - Consider the tempo, length of notes, pitch of notes and how they affect the mood created.
   - Students can use conventional or original notation.

4 **Evaluate the effectiveness of compositions and discuss their features.**

## MATERIALS

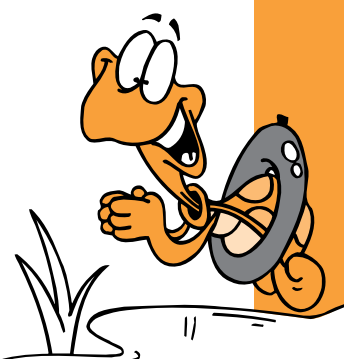
- **Glasses**
- **Water**
- **Teaspoons**
- **Table salt**
- **Keyboard (optional)**
- **Metric teaspoon**
- **Photos** / pictures of healthy landscapes and discharge areas (see 'Photos' on the CD)

## EXTENSION

Choreograph a sequence of dance moves that reflect the mood of your composition. This could be performed for other classes or at an assembly.

## ASSESSMENT

Could students experiment with the expressive qualities of sound, select and combine musical elements to compose works that express ideas and create scores using notation?



# Let's Act It Out

I

## FOCUS

- How does the water cycle function?
- What factors lead to the occurrence of salinity?

## OBJECTIVES

- Dramatise the water cycle and salinity process
- Understand the water cycle process

## CSF II LINKS

THE ARTS 4.1 Drama
4.2 Drama
4.3 Drama
SCIENCE 4.1 Biological

## BACKGROUND

Understanding the water cycle and how groundwater is part of the cycle helps students to learn about how areas of the land can be salt affected. When there is not sufficient vegetation to absorb and recycle water, it either runs off or soaks into the ground. Groundwater will continue to rise to the surface if not recycled by vegetation or movement underground.

## NOTES

This activity will be most effective when completed after the English activity, *'The Salinity Sequence'* as students will have the opportunity to physically represent previously learnt concepts. If you invite a presenter to your school during the week, they could conduct this during their visit.

## LEARNING TASKS

**1 Arrange the classroom into five areas (see teacher task card 1).**

**2 Assign students roles as part of the water cycle**
- 4 water carriers per group
  (clouds, river, trees, lake, ground and watertable)
- 1 'sign holder'.
  (signs titled 'Evaporation', 'Condensation', 'Transpiration', 'Precipitation', 'Recharge Area', 'Runoff', 'Discharge Area')

**3 Follow instructions on the task card 2 to conduct the dramatisation.**
- You can a 'freeze' the situation, where students resume human roles to discuss the process and its implications.

**4 Restrict the dramatisation to the water cycle only for the first time, extending it to include salinity.**
- You may focus an entire session on the activity, repeating it several times to allow students to swap roles.

**5 If time allows, a reliable student can become the narrator.**

## MATERIALS

- ***'Let's Act It Out'***
  **Teacher Task Card 1 & 2**
- **12-24 Water containers**
  (milk cartons, buckets, bottles)
- **Signs**
- **Bed sheet**
- **Chalk to mark boundaries**
- **Salt** (optional)

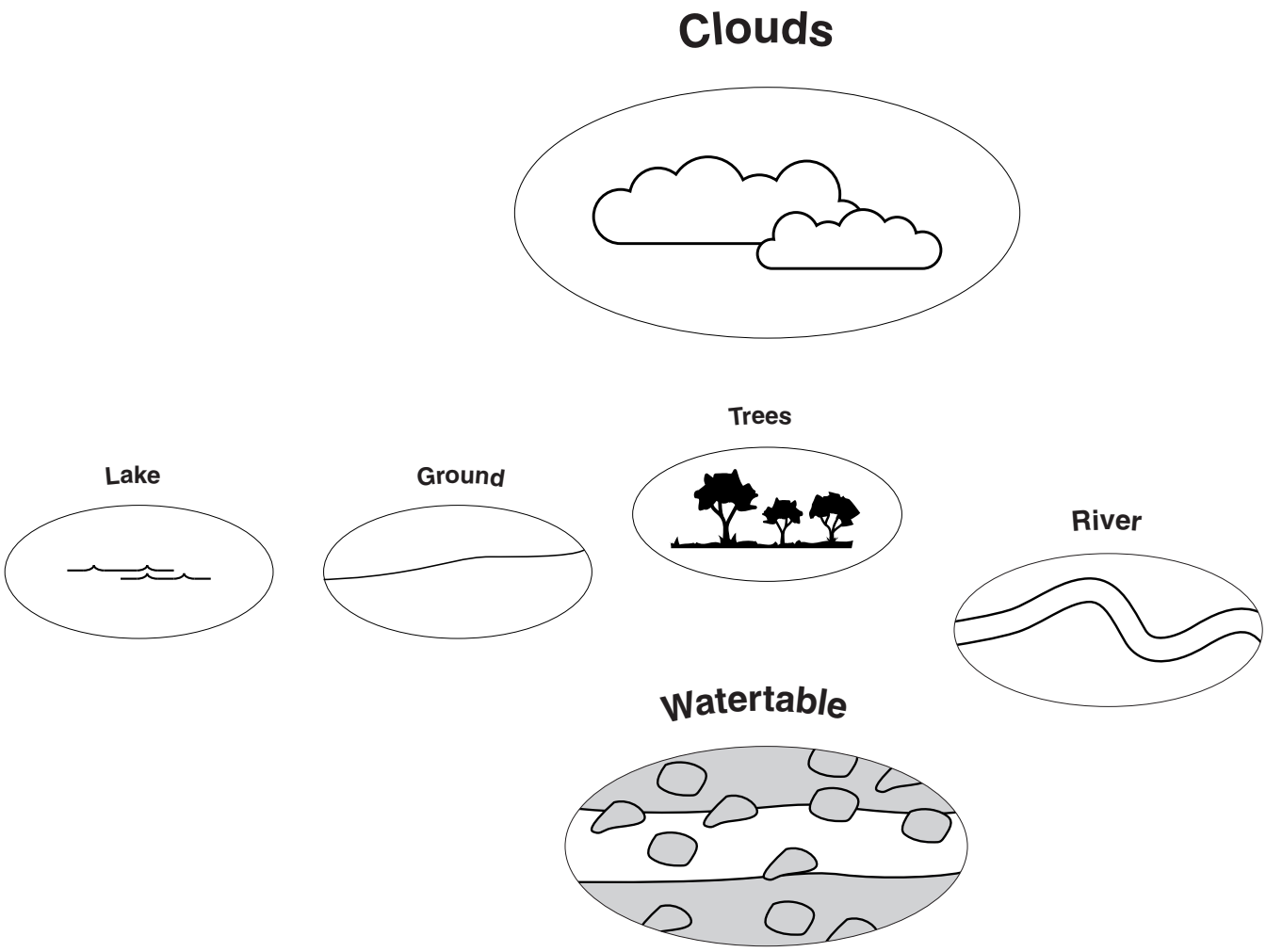
## EXTENSION

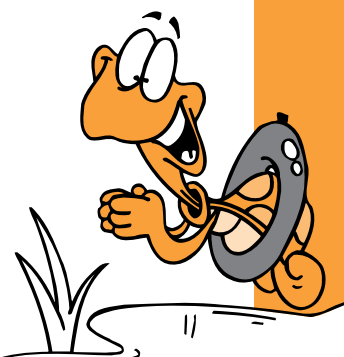
See the *'Let's Act It Out'* Task Card. You may add in other scenarios to the activity including flooding rains, farmer planting lucerne, trees or saltbush, a drought, or the impacts on native animals.

## ASSESSMENT

Did students demonstrate the ability to take on roles and experiment with ideas through drama? Could they describe personal observations about the content of the drama and draw parallels between the concepts explored and those that occur in our natural environment?

## WATER CYCLE MAP



# Let's Act It Out - Teacher Task Card 2

With students in designated positions, begin the activity with all water containers in the lake area.

**NOTE** water containers can be empty during this activity. If using water, you will need to undertake this activity in a 'wet' area.
The **Sign Carrier** holds up the sign (shown in capitals below) for each process.

**1** Each of the four **Lake** people carry a bucket of water to the **Clouds** (EVAPORATION).

**2** The **Clouds**, receive the water containers, and prepare for rain (CONDENSATION).

**3** The **Clouds** deliver two water containers to the **Ground** and two to the **River** (PRECIPITATION).

**Repeat the process. The Lake should now be empty (i.e. no water containers) while the River and Ground are becoming full.**

**4** The **River** passes two buckets of water downstream to the **Lake** and two buckets back to the **Clouds**.

**5** The **Ground** passes two buckets to the **Trees**.

**6** The **Ground** passes two buckets to the **River** (RUNOFF).

**7** The **Trees** use the water and release the two buckets onto the surface of their leaves. (TRANSPIRATION). This water then evaporates back to the **Clouds**.

**Return all buckets to the lake and repeat steps 1-4.**

**8** All the buckets of water on the **Ground** infiltrate through the soil to the **Watertable** (RECHARGE AREA).

From step 8 there are a number of options for water movement. Trial each and discuss the implications.

- The **Trees** soak up four buckets of water from the **Watertable**.
- The **Trees** are cut down, and more water comes from the **Clouds** to the **Ground** and into the **Watertable**.
- The **Watertable** rises to the **Ground** (RECHARGE AREA).
- The **Watertable** rises into the **Lake** and **River** bringing salts along with it.

**CHALLENGE** Modify this activity by adding salt to the water cycle.

# Salt Ceramics

M

## FOCUS

- How can we make salt ceramic objects to reflect elements from our salinity studies?

## CSF II LINKS

THE ARTS 4.1 Art
4.2 Art

## OBJECTIVES

- Craft objects from salt ceramic
- Paint salt ceramic objects

## BACKGROUND

Salt ceramic recipe: 2 cups salt, two-thirds cup water, 1 cup cornflour dissolved in 1/2 cup cold water.
Method*: Heat salt and water in saucepan until boiling. While stirring, add dissolved cornflour. Allow to cool, then mix with hands – you may need to add a few drops of water to make a pliable consistency.

## NOTES

Making salt ceramic (using a hotplate) can be dangerous if not supervised closely. *Students could be involved if adult volunteers are available at school or at home prior to this session. Alternatively, the teacher could make the salt ceramic in advance.

## LEARNING TASKS

**1 Prepare your salt ceramic.**

**SAFETY Preparation of salt ceramic recipe involves the use of heating elements and requires adult supervision.**

**2 Experiment with salt ceramic as a medium.**
- Can you roll it flat, roll it into a sausage, shape it into a ball or cube, make a pinch pot, join pieces together, etc?

**3 Challenge students to sculpt an object relating to the salinity theme.**

**4 Work in groups or as a whole class to sculpt objects that combine to create a scene.**
- a healthy or salt-affected catchment area, farm, tree, town, river, lake, etc.
- a water cycle
- people revegetating the land.

**5 Salt ceramic will harden at room temperature in two days.**
- Students could then paint their creations.

## MATERIALS

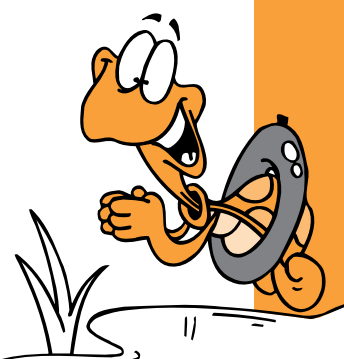
- **Salt ceramic**
- **Newspaper**
- **Art smocks**
- **Assorted tools**
- **Assorted materials**
- **Paints**
- **Brushes**
- **Water**

## EXTENSION

Sculptures could be displayed in your classroom or in your local library, town hall or North Central Catchment Management Authority office with a sign explaining how you've been engaged in the salinity theme and what you have learnt.

## ASSESSMENT

Could students develop art works that communicate observations of their own environment? Did they demonstrate the use of skills and techniques to develop art works individually and collaboratively?



# Change Your Perspective

C

## FOCUS

- How can we use illustrations to show contrasting salinity scenes?

## CSF II LINKS

THE ARTS 4.1 Art
4.2 Art

## OBJECTIVES

- Illustrate healthy and salt-affected environments
- Present illustrations as an optical illusion

## BACKGROUND

Salinisation is a dynamic process. Change for better / worse is a constant variable in the battle to improve the health of the environment. By producing art that reflects two contrasting landscapes, students can reflect on both the negative impacts of salting and the positive actions of those who aim to prevent it.

## NOTES

This activity is best done when students have the prior knowledge necessary to distinguish between healthy and salt-affected environments in order to illustrate the features of each. This activity is an effective assessment tool to evaluate student's understanding.

## LEARNING TASKS

**1 Complete two contrasting illustrations on white A4 paper.**

- Students can draw from a bird's-eye, side on or even cutaway view (this one could be appropriate to show rising watertables).

**The paper should be in portrait form (both pieces should be the same). Illustrations could include:**

- A healthy / unhealthy catchment
- A landscape scene prior to / after European settlement
- A healthy / salt-affected piece of land
- A healthy / salt-affected tree or plant
- Good farm practice / bad farm practice
- Ways of saving / wasting water
- Birds and animals in a healthy / salt-affected environment.

**2 Students follow the instructions on the worksheet to dissemble and reassemble their illustrations on an A3 page in landscape to form an optical illusion.**

**3 Students discuss their artwork with the class.**

## MATERIALS

- ***'Changing Your Perspective'* Student Worksheet**
- **Coloured A3 paper** or card (1 each)
- **White A4 paper** (2 each)
- **Textas**, pencils, crayons, paint, watercolours etc.
- **Scissors**
- **Glue sticks**
- **Rulers**

## EXTENSION

Students could prepare and present a creative writing piece about their artwork highlighting their feelings about the two contrasting scenes.

## ASSESSMENT

Could students develop art works that communicate experience and observation of their own environment? Did they demonstrate the use of skills and techniques individually and collaboratively? What does students' artwork / talk convey about their understanding of salinity issues?

# Change Your Perspective - Student Worksheet

**Name** _____

Create a dazzling optical illusion that shows what you know about salinity.

Choose two contrasting illustrations to draw.

- A healthy and an unhealthy catchment
- The land before and after European settlement
- Healthy and salt-affected land
- A healthy and salt-affected tree or plant
- Good farm practice and bad farm practice
- Saving and wasting water
- Wildlife in a healthy and salt-affected environment

## MATERIALS

- **Coloured paper** or card (1 each)
- **White A4 paper** (2 each)
- **Textas**, pencils, crayons, paint, watercolours etc.
- **Scissors**
- **Glue sticks**
- **Rulers**

## INSTRUCTIONS

**1** Complete each contrasting illustration on the pieces of white paper.

**2** On the back of each illustration, use a ruler to mark 2 cm intervals along the top and bottom edge of the paper. Rule vertical lines to join them from top to bottom.

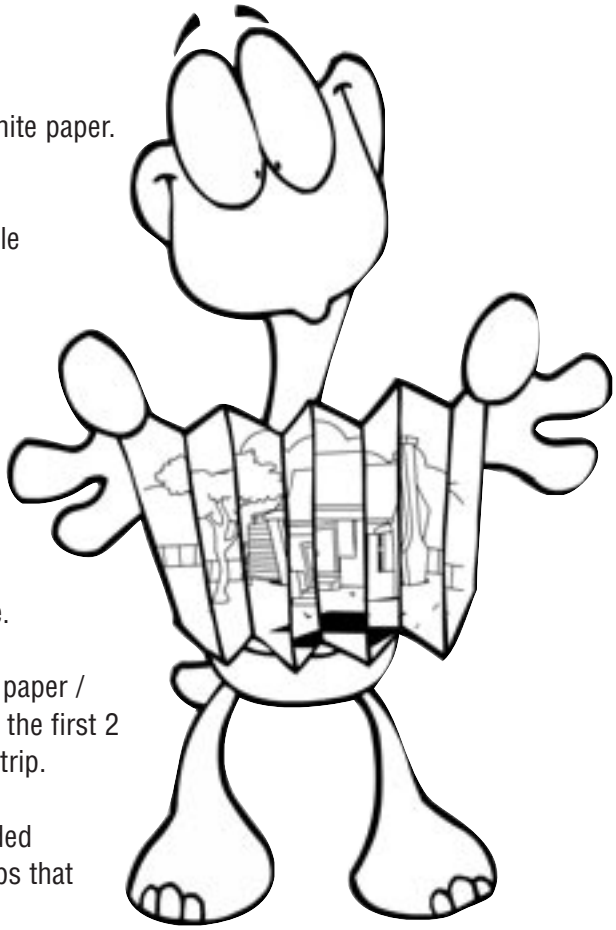
**3** Cut along each line carefully, keeping the strips in order.

**4** Mark 2 cm intervals onto a piece of coloured paper or card as you did in Step 2. This time your vertical lines must be very faint.

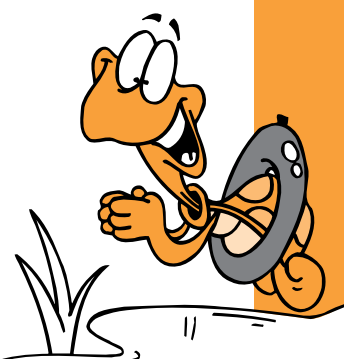
**5** Fold along each faint line you ruled, making one fold forwards, the next one backwards and so on for each line.

**6** Glue the strips from your first illustration onto the folded paper / card. It is very important that the first strip is glued onto the first 2 cm section. Leave a 2 cm gap before you glue the next strip.

**7** Glue the strips from your second illustration onto the folded paper / card. This time the strips will be glued on the gaps that were left in Step 6.



**8** Your artwork is now complete. Try it out! From one angle you will see one scene and from the other angle you will see your second scene. GROOVY !



# Dramatic Salinity Scenes

C

## FOCUS

- How can we express salinity scenes?

## OBJECTIVES

- Explore moods, actions and situations through mime
- Adopt the identity of animals, plants and people
- Use body language, facial expressions and gestures

## CSF II LINKS

THE ARTS 4.1 Drama
4.2 Drama
4.3 Drama

## BACKGROUND

Salinity has an impact on many parts components of a healthy catchment. Rising watertables and increased salinity can affect the growth of native plants, and eventually kill them. This affects animals and humans. Understanding the impacts of salinity can help generate enthusiasm for undertaking action to improve the health of catchments.

## NOTES

The following list of drama ideas can be implemented in a variety of ways depending on the dynamics of your class, space available and your students' previous drama experience. No materials are needed.

## LEARNING TASKS

1 **Use a large open space to allow creative drama pieces to be explored by students.**

2 **The following are prompts to explore ways of moving and performing to express moods, actions and situations.**
- Perform each as mime to encourage students to use alternative methods of communicating.

**Activity A**
Students choose a scenario, which they mime (see teacher task card).

**Activity B**
Start with an empty space, one by one each student enters the scene as an object (living or non-living) and freezes until an entire scene has been created. Later bring the whole scene to life.

**Activity C**
The class creates a scene that portrays a healthy waterway. When this is complete, begin altering the scene, adding the other half of the class as unhealthy elements.

## MATERIALS

- ***'Dramatic Salinity Scenes'*** **Teacher Task Card**
- **Various costumes** or pieces of fabric to assist in expression
- **Open space**

## EXTENSION

You could have scenes created by half the class with the other half making decisions about how to alter the scene. Perhaps a student could commentate or narrate the scene?

## ASSESSMENT

What did students' chosen roles demonstrate about their understanding of catchments? Were they able to predict and portray how their role may change in a new situation?

# Dramatic Salinity Scenes - Teacher Task Card

### Activity A

Students should choose a scenario from the list below to mime. This will form a prompt to explore ways of moving and behaving to express moods, actions and situations.

- Drinking a mouthful of pure, fresh water
- Drinking a mouthful of very salty water
- Walking over salt crystals with bare feet
- Digging a hole and planting a tree
- Growing from a healthy seed to a tree
- Deteriorating like a salt-affected tree
- A heated debate at a town meeting
- Receiving a letter granting you $5000 for environmental projects at your school
- A possum looking for shelter in a bare paddock
- Walking through a muddy discharge area
- Running salt through your fingers
- Stepping over fallen tree trunks after clearing
- A farmer looking over his prosperous farm
- A farmer looking over his salt damaged farm
- A Landcare group working together happily
- The latest EC reading of your dam water proving to be double that of the last

### Activity B

Start with an empty space, one by one each student enters the scene as an object (living or non-living) and freezes until the entire scene has been created. Consider creating a scene with multiple levels e.g. on the floor, crouching or standing.

- Top of a hill
- Wetland
- Sustainable farm
- A whole catchment
- Town
- Waterway

### Activity C

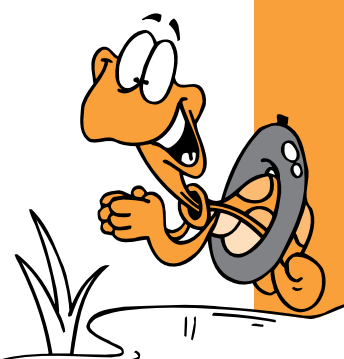
The class creates a scene that portrays a healthy waterway. Initially use half the class in roles from the list below.

- Part of a river
- Kangaroo
- Wetland
- A building in the town
- A big old tree
- Native grasses
- A hill
- Happy farmer
- A young seedling
- Waterbirds
- Frogs
- Children planting trees

When the scene is complete, the teacher could give a cue for the scene to come alive and for a short time the trees could sway, river flow, frogs jump and birds feed. Given a cue, the scene must freeze again.

At this point, begin altering the healthy catchment scene by adding the other half of the class as unhealthy elements from the list below. Students demonstrate how these changes affect the scene and their role.

- Discharge area
- Salt tolerant weeds
- Introduced fish
- Rabbits
- Eroded soil
- A polluter
- An axe
- Dying trees
- Building falling down



# Drawing For The Future

A

## FOCUS

- How can we design a sustainable property?

## OBJECTIVES

- Use art to show how to plan for the future
- Plan and prepare work that relates to the school community

## CSF II LINKS

THE ARTS 4.1 Art
4.2 Art
4.3 Art
4.4 Art

## BACKGROUND

To have an impact on salinity issues in the North Central region of Victoria, we need to prepare action plans for the future. One way of reducing salinity recharge and discharge areas, and the input of water to groundwater is to prepare a site action plan. Plans illustrate how water can be effectively used onsite. It could include restricting water use inside and around the home and property, planting vegetation to use water, and setting aside areas for different land uses.

## NOTES

This activity relies on students having a good understanding of both salinity processes and actions that can impact on salinity. You may prepare a plan as a class, in groups or individually. You may even like to assign this as a homework assignment, encouraging links between the students and the school community.

## LEARNING TASKS

1 **Review with students their knowledge about salinity causes, impacts and management options including Waterwise actions.**

2 **Discuss the key components of a salinity management plan, including a site plan.**
- Students choose a location for their plan or you may assign a site.
- Preparing a project outline that students can address, or take home and discuss could assist this activity.

3 **Students prepare a site plan.**
- Outline your expectations and allow students to brainstorm their expectations.
- Students can research Waterwise actions on the internet.

4 **Provide students with ample time and ongoing assistance to complete their plans.**
- Invite a salinity management expert to the classroom or visit an office where these plans are developed.

5 **Have students present their salinity site plan to the owner of the site they chose to study.**

## MATERIALS

- **Large pieces of card** or paper
- **Rulers**
- **Textas / paint / pencils**
- **Information** on salinity management techniques
- **Photos** of positive and negative management practices (see 'Photos on the CD)
- **Computers** with internet access

## EXTENSION

Complete a full salinity management plan by allocating timelines to achieve what they have illustrated for the sites. Talk to the North Central Catchment Management Authority about the costs of changes, including fencing, plants and equipment.

## ASSESSMENT

Did they demonstrate the use of skills and techniques individually and collaboratively? What does students' artwork / talk convey about their understanding of salinity issues and management?