NRM Education

The NRM Education Program is playing a critical role in contributing to the knowledge, skills and confidence of young people and educators to manage natural resources sustainably.

This resource provides information and activities to assist students in learning about our most precious resource - water.

Students listen to a short narrative that tells the story of the River Murray as it travels from its source to the sea with the students playing the part of pollutants. Students discuss solutions for preventing water pollution and put their suggestions into action.

For more information or to discuss opportunities for your school, contact your local NRM Education Coordinator:

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Unit Overview

Year levels: Foundation to Year 7

Learning areas: Science, Geography

Big ideas: Human activities can cause pollution of local waterways and have negative impacts on catchment health.

Sustainability organising ideas:

Ol.1 The biosphere is a dynamic system providing conditions that sustain life on Earth.

Ol.2 All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival.

Ol.7 Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments.

Students will know / understand / do:

- Know what a catchment is
- Identify the parts of a catchment, including natural and artificial elements
- Identify pollutants that may enter catchments and their origins
- Understand the impact of pollutants on animals, plants and people
- Suggest ways to prevent pollution of catchments
- Implement actions to reduce or prevent pollution

Essential questions:

- What is a catchment and why is it important?
- What human activities can cause pollution in catchments?
- How can we reduce or prevent pollution in catchments?
Introductory Lesson

Equipment
- Map or poster of the River Murray catchment

Step 1
Begin by introducing students to water catchment areas and pollution.

Display the ‘River Catchment’ picture (available from the SAMDB NRM Ed website) or a map of the River Murray catchment and explore the definition of a catchment: *An area of land that catches water and drains it to the lowest point, usually a creek, river or ocean.*

Step 2
Ask students to name things we will find in the local catchment. List these as either NATURAL (such as plants, animals, hills and creeks) or ARTIFICIAL / HUMAN-MADE (such as buildings, roads, cars and boats).

Explain that rain travels across or past all these things on its way to the river, so we need to be careful that pollution doesn’t get washed along with the rain water.

Note: depending on the age of your students, you may like to explore the water cycle at this point.
The River Murray Story Lesson

Equipment:
- Clear container of water (e.g. an aquarium)
- Lined rubbish bin
- Clean up cloth
- Stick or spoon for stirring
- Rubber gloves
- Pollution (see ‘Preparing the pollutants’)
- The River Murray Story text
- River Catchment image (available on the SAMDB NRM Education website)
- Danny the Drip image (cut out - see next page)

Step 1 - Interactive story telling
Students sit with their container of pollution in front of them (don’t shake or open it yet). A clear container of water is placed at the front of the class.

Before reading the story instruct students to remember each type of pollutant mentioned in Danny the Drip’s River Murray Story, take note of how it gets into the river and think of ways it can be prevented.

Print or project the picture on a smartboard. Cut Danny out and stick him on the River Catchment image. Follow his journey along the image as you tell the story.

As each pollutant is mentioned the student(s) who have that pollutant in their container are invited to come out to the front and pour it into the container of water. Stand to the side so that everyone can see the water, stir if necessary.

Step 2 - Follow up discussion
- Why was Danny so sad at the end of the journey?
- What were the different pollutants mentioned in the story?
- Where does each pollutant come from?
- What problems might each pollutant cause to the river environment?
- What can be done to prevent each pollutant from entering the river?
- Give students an opportunity to ask questions about the story.

Step 3 - Clean up
Ask students to think of the best way to dispose of the polluted water and the containers used to collect pollution.

Use rubber gloves or a sieve to remove solid waste and sort into rubbish or compost. Pour liquid onto the garden. Wash then reuse or recycle jars and containers.
Preparing the pollutants

Before conducting the River Murray Story session you will need to prepare a small amount of each type of pollutant mentioned in the story. Teachers can prepare these with the class or allocate one type of pollution to each student and ask them to bring them from home. Small jars, such as baby food containers, or plastic containers with lids are ideal.

On the next page is a list of pollutants to match those in the story. It also explains how to make those ‘pretend’ pollutants and includes a letter for parents in the event you get your students to bring pollutants from home.

Below is a colour image of Danny the Drip that you can also use when telling the story. Cut Danny out and stick him on the Water Learning and Living poster, follow his journey along the poster as you tell the story.
Dear Parent / Caregiver,

We are learning the story of Danny the Drip. Danny the Drip takes students on a journey from the top to the bottom of a water catchment area, describing different land uses and the potential water pollution they produce. During the story students are invited to place imitation ‘pollution’ into an aquarium of water at the front of the class.

Telling the story of Danny the Drip requires the preparation of small amounts of imitation water pollution. Each student has been allocated a type of pollution to prepare for homework and bring into the class for the River Murray Story lesson. We suggest that you use small jars or leak-proof containers to hold the pollution and emphasise the importance of not collecting the actual pollutants in certain cases such as petrol, poo and toxic chemicals that might be harmful or poisonous.

Below is a list of the different types of pollution mentioned in the story and how to prepare them.

______________’s pollution is: _______________________________________

Please return imitation pollution in a labelled jar or leak-proof container by: ________________

<table>
<thead>
<tr>
<th>Pollution</th>
<th>Ingredients</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boat Oil #1</td>
<td>Soy sauce and/or cooking oil</td>
<td>Put in leak-proof container</td>
</tr>
<tr>
<td>Salt</td>
<td>Cooking salt</td>
<td>Put into container</td>
</tr>
<tr>
<td>Cow manure</td>
<td>Play dough or plasticine (not the real thing!)</td>
<td>Put into container</td>
</tr>
<tr>
<td>Dirt</td>
<td>Dirt or sand</td>
<td>Put into container</td>
</tr>
<tr>
<td>Rubbish #1</td>
<td>Chip packet or plastic bag</td>
<td>Collect</td>
</tr>
<tr>
<td>Fertiliser</td>
<td>Water and green food colouring</td>
<td>Put into leak-proof container</td>
</tr>
<tr>
<td>Chemicals</td>
<td>Water and red food colouring</td>
<td>Put into leak-proof container</td>
</tr>
<tr>
<td>Pesticides</td>
<td>Water and blue food colouring</td>
<td>Put into leak-proof container</td>
</tr>
<tr>
<td>Gravel and oil</td>
<td>Gravel/pebbles and cooking oil</td>
<td>Put into leak-proof container</td>
</tr>
<tr>
<td>Lawn clippings</td>
<td>Grass/lawn clippings</td>
<td>Collect</td>
</tr>
<tr>
<td>Leaves</td>
<td>Dry or green leaves</td>
<td>Collect</td>
</tr>
<tr>
<td>Detergent</td>
<td>Dishwashing liquid</td>
<td>Put into leak-proof container</td>
</tr>
<tr>
<td>Boat oil #2</td>
<td>Soy sauce and/or cooking oil</td>
<td>Put in leak-proof container</td>
</tr>
<tr>
<td>Rubbish #2</td>
<td>Plastic bottle</td>
<td>Collect</td>
</tr>
<tr>
<td>Sewage</td>
<td>Mud (not the real thing please!)</td>
<td>Put in leak-proof container</td>
</tr>
</tbody>
</table>

Thank you for your help.
The River Murray Story

This story uses the River Catchment image. You can use a cut out of Danny the Drip to stick on the displayed picture and students can follow his journey along the way.

Text in the boxes below can be used during the story or during the discussion after the story is complete.

Danny the Drip’s River Murray Story

The story begins faraway in the upper parts of the catchment of Eastern Australia.

Danny’s journey begins in the mountains, where the rain and melting snow run off the mountains into a stream. This stream is crystal clear and the water is clean and cold. As Danny travels down this stream, many other streams and creeks join up along the way until he reaches the Murray.

As the river runs down the hills, Danny comes across a boat. This boat is old and needs a service and is leaking boat oil directly into the river. “Oh dear,” thinks Danny, “The fish and birds aren’t going to like this.”

- Oil can form a film over the top of the water that makes it hard for the animals to breathe! Fish and water bugs won’t be able to breathe and they might die.
- Oil can stick to birds’ feathers and make it hard for them to fly.
- Using the river for boating and swimming is great, but we need to make sure we look after our boats so that they don’t leak oil into the water.

ADD THE BOAT OIL POLLUTANT TO THE WATER.

As Danny travels further downstream he comes across some dead river red gums, salt, and in the distance he can see a weir.

ADD THE SALT TO THE WATER.

- Has everyone seen a weir or a lock going across the river? People have put these in the river to regulate the water. Sometimes before we had locks the water would go up and down a lot during floods and sometimes would drain away altogether. River Red Gum trees can tolerate water all around them for about two years, but after that they will probably drown.
- Having the locks in the river also means the salinity levels are sometimes high and the Red Gums don’t like salty water! Now that we have locks we don’t have as many floods to wash away the salt! The water just stays at the same level all the time.

As Danny continues his journey he suddenly gets sucked - SSSSLURRP - up into an irrigation pipe and gets pumped across the countryside into an irrigation channel.

As he travels down the channel, he passes a paddock full of cows and sheep.

ADD THE MANURE TO THE WATER.
Manure left in the fields can wash into waterways with rain, and this causes increased nutrient levels which can cause animals and plants to die.

We could make sure that the rivers and waterways are fenced off so that the cows can’t poo near the water, and we can clean up after our dogs too!

As Danny waves goodbye to the friendly sheep he has just passed he sees a farmer riding a big shiny red tractor. As Danny looks at the tractor, he notices the water becoming increasingly dirty. He realises there is lots of soil floating on top.

ADD THE DIRT TO THE WATER.

Plowing fields loosens top soil and this soil blows into the river and runs off with rain. Increased soil then sinks to the bottom and make the river bed silty.

Danny continues on past the farmer and flows down the channel into a town. Danny is very excited, he’s never been to a town before. While he is looking about in wonder at all the buildings, he notices that his ride in the river is becoming quite bumpy as he squeezes past all the rubbish in the water.

ADD SOME RUBBISH TO THE WATER.

Rubbish in the streets often finds its way into our waterways, and not only does this look horrible, it can be very dangerous to the fish and other animals that live in the rivers.

Imagine you are a fish and you suddenly find yourself stuck in a plastic bag. The more you wriggle around the more you get stuck.

We need to make sure we clean up after ourselves and put rubbish in the bin, NOT in the street. We could also recycle things like paper, plastic, cans and bottles.

As Danny passes the town he can see more fields in the distance, and with that he feels himself being sucked - SSSSSLURP - up into another pipe, and is spun around and around and around until he is very dizzy and gets spat out onto a field.

Danny realises he is being used to water the fields. He becomes very worried about how he is going to get back to the river, when he sees a strange mist coming over him. It’s fertiliser being sprayed on to the fields.

Danny is getting very scared, he feels all sticky and yucky. He looks up at the sky wondering what to do, when a dark cloud comes over and big drops of rain begin to fall. The more rain that falls, the further Danny is washed over the fields, until finally he feels himself go PLOP! back into the river.

ADD THE FERTILISER TO THE WATER.

Explain that farmers use fertilisers on their crops to help the crops grow, but when it rains the fertiliser washes back into the river.

We need to make sure we only use a little bit of fertiliser, and that we put it on our crops when it’s a dry, still day so it doesn’t blow or run into the river.
Now Danny is back in the main river, and he comes across a factory. He can see big chimneys with steam blowing out the top. The river starts to turn a funny red colour and Danny realises that the factory is releasing chemicals into the water.

**ADD THE CHEMICALS TO THE WATER.**

- Water run-off from industrial sites can contain chemicals that are harmful to the plants and animals.
- We need to make sure that people who are using chemicals are getting rid of them properly and not letting them run into the waterways!

As Danny continues down the river he can see apple trees growing along side the river. These apples are big and red and juicy. The farmer has been working very hard to keep the insects away from them, using pesticides.

**ADD THE PESTICIDES TO THE WATER.**

- Pesticides wash into the river in the same way as fertiliser.
- Pesticides can kill animals and make the water unsafe to drink and swim in!
- We could grow organic foods so that we aren’t using these nasty pesticides.

As Danny leaves the big red juicy apples behind he feels the current in the water start to get stronger, and he is pulled towards a weir. Danny is sucked through the weir and drops out the other side, feeling very shaken and unsteady.

**STIR THE WATER MIXTURE.**

- Explain that weirs and locks are used to regulate water, but it means that fish and other animals can’t go upstream anymore.

As Danny continues his journey he passes a building site where there is a cement truck and lots of cars. He looks around, very interested in what they are building, until he realises the water has become very sludgy and oily.

**ADD THE GRAVEL AND OIL MIX TO THE WATER.**

- Explain that when we use our cars they leave rubber and oil on the road and this washes into storm water drains that lead to the rivers and sea.
- Some towns don’t let their storm water run into the river. They recycle it and clean it and use it on the town gardens.

As Danny bobs along down the river he can see a wetland. He realises that this is the irrigation channel that he was in before meeting the river, although the people have been very good in making it a wetland for all the birds and animals. There is a lot of stuff, grass, leaves, and detergent coming out through the channel.

**ADD THE GRASS CLIPPINGS, LEAVES AND DETERGENT TO THE WATER.**
As Danny passes the outflow he realises he is at the mouth of the river, and he can see the sea. Danny is very excited and as he is swept out to sea, he comes across a marina with lots of boats. Some of them are very new and shiny, but there are some that have not been used for a long time, and they are leaking boat oil into the water.

**ADD SOME MORE BOAT OIL TO THE WATER.**

- Oil can form a film over the top of the water that makes it hard for the animals to breathe! Fish and water bugs won’t be able to breathe and they might die.
- Oil can stick to birds feathers and make it hard for them to fly.
- Using the river for boating and swimming is great, but we need to make sure we look after our boats so that they don’t leak oil into the water.

As Danny looks out to sea, a big wave comes in and he gets washed over to the other side of river mouth. Here the water is very yucky. He looks up to see a big pipe, with rubbish and sewage flowing out of it.

**ADD SOME MORE RUBBISH AND THE SEWAGE TO THE WATER.**

- Sewage gets pumped into the sea and can cause lots of problems, not just for the fish but also for humans.
- We shouldn’t let sewage flow into our waterways. Some towns have sewage recycling where they use the water on gardens.

As Danny looks back at the mouth behind him, he sees the very dirty water that is coming out of it, and he becomes very sad to know that the people are not looking after the river.

**THE END.**

- Explain that even though it is very good that the people have made a wetland, this traps all the rubbish and chemicals in the water as it comes out, so it may not be very healthy. Willow trees are not native to our system and even though they look lovely, they drop lots of leaves in autumn and some of them even hang their branches in the water, using lots of oxygen. This means that fish and other animals might find it hard to breathe.
- When dad mows the lawn he could make the clippings into compost and put it on the garden!
# River Murray Story Worksheet

**Early Years**

1. **Draw a picture of a clean river and a polluted river.**

<table>
<thead>
<tr>
<th>Clean river</th>
<th>Polluted river</th>
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</table>

2. **Can you remember two things that polluted the river?**

- The boat was leaking oil into the river.

3. **Design a poster to tell people how to stop water pollution.**
1. Create a storyboard to recount Danny the Drip’s journey.

<p>| | | | | |</p>
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2. Name the pollutants in the story: ________________________________

   ________________________________

   ________________________________

3. Describe the human activities that create the following types of pollution:

   Fertiliser ________________________________

   Rubbish ________________________________

   Detergent ________________________________
4. Select three types of pollution and describe what can be done to prevent them.

<table>
<thead>
<tr>
<th>Pollution:</th>
<th>Solution:</th>
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5. Select one solution that you could carry out and describe how you will take action e.g. create a poster, do a presentation at assembly, start a recycling program at school:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
## The Effects of Pollution

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Effects</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fertiliser</strong></td>
<td>Algal blooms</td>
<td>Don’t use excessive amounts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use solid fertilisers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use compost or mulch</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Don’t apply on wet or windy days</td>
</tr>
</tbody>
</table>
| **Manure and septic tank discharge** | Algal blooms  
Bacteria                                                   | Clean up after your dog                                                                       |
|                                 |                                                                        | Fence off rivers from cattle and sheep                                                        |
|                                 |                                                                        | Pump water to drinking troughs                                                               |
|                                 |                                                                        | Maintain septic tanks                                                                        |
| **Algae**                       | Respires at night, using oxygen from the water  
Chokes and clogs the waterway  
Some algae is toxic  
Smells | Decrease the amount of nutrients entering the waterway (organic matter and fertiliser)  
Chemical and other control measures |
| **Pesticides and insecticides** | Kills flora and fauna  
Water becomes unsuitable for drinking or recreation | Don’t use excessive amounts  
Use products that biodegrade quickly  
Don’t apply on wet or windy days  
Use alternative biological controls |
| **Oil and petrol**              | Poisons flora and fauna  
Forms a film on the water surface which impacts aquatic macroinvertebrates | Make sure cars are serviced regularly  
Place a drip tray under cars |
| **Salt**                        | Freshwater flora and fauna are not adapted to high levels of salt  
Water may become unusable for drinking and farming | Reduce irrigation drainage by watering more efficiently  
Salt interception schemes  
Increase the amount of deep-rooted perennial vegetation |
| **Detergent**                   | Makes the water harder  
Contains phosphate, a nutrient which can cause algal blooms  
Strips the protective coating from the skin of frogs and fish | Use low/no phosphate detergents and car wash  
Don’t wash cars or machinery on driveways or roads where the runoff can enter the storm water system |
| **Litter**                      | Clogs up the waterway  
Stagnation  
Wildlife can mistake it for food  
Bacteria  
Unsightly | Dispose of litter thoughtfully  
Reduce, reuse and recycle  
Organise clean up days  
Install trash racks |
| **Lawn clippings and leaves**   | Use up oxygen as they decompose  
Increase nutrient levels in water causing algal blooms | Compost and mulch green waste |
| **Dirt, sand and gravel**       | Prevents sunlight from reaching water plants  
Water life are unable to see predators or find food  
Can clog the gills of fish and macroinvertebrates  
Can contain the seeds of weeds | Sweep dirt onto the garden and not the road  
Use a dustpan  
Cover trailers with a tarpaulin |
| **Fishing lines and hooks**     | Kills and injures birds and fish  
Poisonous to wildlife and humans | Fish responsibly  
Clean up after yourself |
| **Toxic chemicals**             | Water becomes unsuitable for drinking or recreation | Prevent runoff from factories entering the storm water system  
Build storage tanks which can be emptied professionally |
| **Rubber**                      | Releases chemicals into the water  
Wildlife can mistake it for food | Drive safely to avoid skidding  
Replace old tyres and don’t leave strips of shredded tyres on the road |
Additional Activities

Water Testing

With older students who are involved in Water Watch monitoring, you may like to do ‘before and after’ tests on the water used in the River Murray Story activity.

Use the Water Watch instructions (available on the SAMDB NRM Education website). Water testing kits can be borrowed from Natural Resources Centres.

1. Perform the salinity, turbidity, phosphates and nitrates tests on the clean water before you begin the River Murray Story activity.
2. Record the results on the board in a ‘before’ column.
3. Repeat the tests after the story activity.
4. Record the results on the board in an ‘after’ column.
5. Discuss the results.

Performing the River Murray Story

Danny the Drip’s River Murray Story makes a great play that can be shared with other classes at a school assembly. Why not buddy older students with a junior primary class to help choreograph and perform the story!

Option 1 (easy)
- Teacher or student(s) narrate the story.
- Each pollutant is added to a LARGE tank of water as the story is told.
- Students chorus a response to each type of pollution, for example: “Oh no, not fertiliser” or “Too much fertiliser will make algae grow”.
- End with students carrying pollution solution posters or banners.

Option 2 (a little more work)
- Student(s) narrate the story.
- As the story is told students act out the land uses (complete with sound effects).
- The pollutants are placed into a LARGE tank of water on cue.
- Have students act out the impacts of these pollutants, for example: Detergent strips the protective coating off frogs so they will pick up diseases or too much dirt in the water stops sunlight getting to water plants.
- End with students performing a Pollution Solution Rap (led by ‘Danny the Drip’) to educate others in how to prevent water pollution.
Additional Activities  continued

The River Murray Story Big Book

Create a lasting resource for your school by creating a Big Book of Danny the Drip’s River Murray Story. Students can work in pairs or small groups to illustrate a paragraph from the story (there are 16 paragraphs). The text will need to be simplified if your big book is to be read by younger students.

- Students identify key words and events in each paragraph
- Simplify the paragraph to a single sentence
- Illustrate each sentence
- Don’t forget a cool book cover
- A list of pollution solutions could be included too

Sedimentation

When soil, sand and silt washes into the river it can make the water dark and murky. What problems do you think this can cause for plants, fish and aquatic macro invertebrates?

Experiment

You will need: Plastic bottles, water, stop watch, sand, gravel, dry dirt, clay soil, potting mix, salt

1. Fill plastic bottles with water then add a different material to each one. Leave them to settle overnight.
2. Make predictions about which materials will settle quickest and why.
3. Shake the bottles.
4. Time how long it takes for each material to settle.
5. Discuss the results.

- Consider factors that could impact on sedimentation (e.g. speed of water flow or Carp)
- Use a turbidity tube to measure the water clarity after the bottles have been shaken.

Litter Survey

Litter left in the school yard, on the streets or in surrounding areas can makes its way to the River Murray through the storm water system. Why do people litter?

- Conduct a Litter Survey of your schoolyard and/or surrounding area.
- Collect any litter in the area then sort it into categories e.g. natural/human-made, food packaging, recyclable/not recyclable, and different materials.
- Identify litter ‘hot spots’ and the most common type of litter.
- Generate solutions to these problems.
- Conduct a survey in your school to find out people’s attitudes to litter.
Additional Activities continued

Pollution Dialogues
What would you say to people who pollute the river?
How could you help them to understand the problems and change their behaviour?
Write a letter to, or act out a role-play with, people who:
• Drop litter
• Cut down trees
• Go fishing
• Smoke
• Don’t recycle
• Use fertiliser and pesticides
• Have a dog
• Have a boat
• Wash their car on the road

A Fishy Tale
Imagine you are a fish living in the river. Write your own River Murray Story.
Explain why clean water is so important to you. Describe where you live, what you eat and the problems that pollution causes.

We all Live in a Catchment
Make a poster, collage or model of the catchment you live in, showing different natural features, land uses and activities. On one side of the river show a healthy catchment. On the other show the things that create an unhealthy catchment.
## Curriculum Links

<table>
<thead>
<tr>
<th>Year</th>
<th>Content Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Science</strong></td>
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<tr>
<td></td>
<td><strong>Geography</strong></td>
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<td><strong>Curriculum Links</strong></td>
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<td><strong>Science</strong></td>
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<td><strong>Geography</strong></td>
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<tr>
<td><em>F</em></td>
<td>Living things have basic needs, including food and water (ACSSU002)</td>
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<tr>
<td>1</td>
<td>Living things live in different places where their needs are met (ACSSU211)</td>
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<td>1</td>
<td>Observable changes occur in the sky and landscape (ACSSU019)</td>
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<tr>
<td>2</td>
<td>Earth’s resources, including water, are used in a variety of ways (ACSSU032)</td>
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<td>4</td>
<td>Living things, including plants and animals, depend on each other and the environment to survive (ACSSU073)</td>
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<td>6</td>
<td>The growth and survival of living things are affected by the physical conditions of their environment (ACSSU094)</td>
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<td>7</td>
<td>Water is an important resource that cycles through the environment (ACSSU222)</td>
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<td>The River Murray Story also uses Science Inquiry Skills in all year levels, including Planning and Conducting (making observations about the effect of pollution) and Communicating (sharing their observations and results). See ACARA for details.</td>
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<tr>
<td><em>F</em></td>
<td>The places people live in and belong to, their familiar features and why they are important to people (ACHGK002)</td>
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<tr>
<td>1</td>
<td>The reasons why some places are special to people, and how they can be looked after (ACHGK004)</td>
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<tr>
<td>1</td>
<td>The natural, managed and constructed features of places, their location, how they change and how they can be cared for (ACHGK005)</td>
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<td>3</td>
<td>The representation of Australia as states and territories, and Australia’s major natural and human features (ACHGK014)</td>
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<td>4</td>
<td>The natural resources provided by the environment, and different views on how they could be used sustainably (ACHGK024)</td>
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<tr>
<td>4</td>
<td>The sustainable management of waste from production and consumption (ACHGK025)</td>
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<tr>
<td>4</td>
<td>The importance of environments to animals and people, and different views on how they can be protected (ACHGK022)</td>
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<td>5</td>
<td>The influence people have on the human characteristics of places and the management of spaces within them (ACHGK029)</td>
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<td>7</td>
<td>The classification of environmental resources and the forms that water takes as a resource (ACHGK037)</td>
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<td>7</td>
<td>The ways that flows of water connect places as it moves through the environment and the way this affects places (ACHGK038)</td>
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<td>7</td>
<td>The influence of environmental quality on the liveability of places (ACHGK045)</td>
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<td>The River Murray Story also uses Geographical Inquiry and Skills in all year levels, including Observing, questioning and planning; Collecting, recording, evaluating and representing; Communicating; and Reflecting and responding (particularly in relation to proposing individual and collective action). See ACARA for details.</td>
</tr>
</tbody>
</table>

**Note 1:** curriculum links are not included for Additional Activities. Please refer to ACARA for relevant links if you undertake any of these activities.

**Note 2:** links can be made to other subject areas including English (Creating texts), Civics and Citizenship (Problem solving and decision making) and Health and Physical Education (Contributing to healthy and active communities). Refer to ACARA.

**Note 3:** For Cross-curriculum priorities and General capabilities, check the Content Descriptions at ACARA.
Useful images
Useful images
Resources

NRM Education Sessions and Resources

Water Conservation - How Much River Murray Water Do You Use?
Students discover how much water is available for human use and where we get water from. Students can audit water use and develop ways to be more water-wise.

A Frog’s Life
A Frog’s Life is an investigation of local frogs and their features, encouraging students to become involved in monitoring the health of their waterways using frogs as an indicator.

For a copy of these resources and more visit www.naturalresources.sa.gov.au/samurraydarlingbasin

Useful Websites
The following websites contain information, resources, activities and interactive games associated with the River Murray and its issues:

Learn about meteorology for students.

MurrayCare: http://murraycare.org/
School and teacher resources on the River Murray.

Fantastic website with a Basin Kids page and lots more!

Useful and practical advice for Australians on how to save water and why.

Save the Murray: www.savethemurray.com.au/
Clean up and protect the River Murray and its surrounds.

Waterwise fact sheets, student and teacher resources.

Information in relation to drought, drought management, water use efficiency projects and funding opportunities within the SA Murray-Darling Basin NRM Region.

School Water Audit Kit
Produced by River Murray Urban Users Committee and WaterWise South Australia.
Available from libraries or online book shops.

School camps with a River Murray theme
- “Camp Illawonga” at Swan Reach: www.illawongacamp.com.au
- “Ankara” at Walkers Flat: www.ankaracamp.org.au
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