



WE ARE ALL COOKS RIVER PEOPLE

NAME

CLASS

Junior Student Workbook



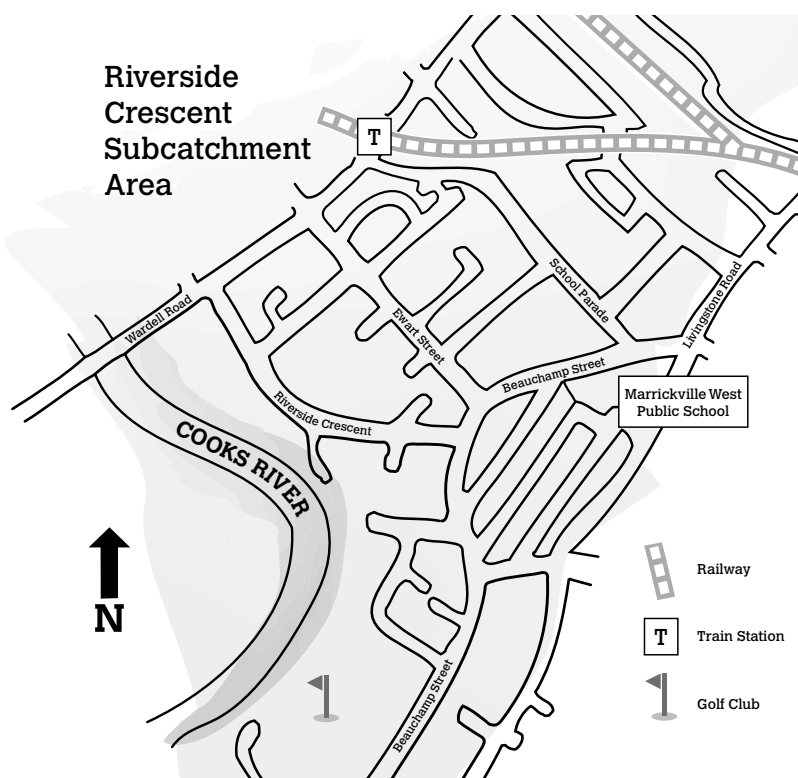
We are all COOKS RIVER PEOPLE

THE UNIT

Marrickville West Public School is a land user in the River Crescent Subcatchment area for the Cooks River (Diagram 1). The Riverside Crescent Subcatchment is in Marrickville South in the south-western part of the Marrickville local government area.

As a land user in the subcatchment, Marrickville West has a relationship with the Cooks River. This relationship is one that is worthy of educational focus. To this end a unit of work, **We are all Cooks River People**, has been developed to reflect, to explore, to develop skills, knowledge and understandings about living and working in the subcatchment area of the Cooks River.

We are all Cooks River People is a HISE, Science & Technology unit but is designed to be integrated into PDHPE, Creative Arts, Mathematics and English unit aligned to the NSW Board of Studies syllabus Outcomes. The unit has also been designed to be implemented over ten weeks (one school term) at Marrickville West Public School. The unit is flexible enough to be shortened if required.



The unit is a sequence of seven key indicators:

- Describe a personal relationship with the Cooks River
- Recount the history of the Cooks River
- Understand a water system
- Describe the biodiversity of the Cooks River
- Understand water quality
- Rehabilitate a damaged water system
- Plan for a sustainable future



We are all
**COOKS RIVER
PEOPLE**

Design of Unit

Information about the Cooks River, its history and environmental issues, is immense and detailed. The unit of work presents a slight portion of this information and is presented in a way to give students a sense of the relationship that they have with the river. It is designed to enable teachers, students and the community to enter into learning about the topic with a sequence of specific activities and resources.

The activities presented in this unit are fully supported in the classroom with teacher directed lessons, hands on activities and whole class and group discussions. Teachers are encouraged to enrich the activities with personal skill and expertise. Hands on science lessons, excursions to the Cooks River, mural painting, guest speakers, mathematical data collection, wikis, story writing are a few ways to embrace this unit in the classroom.

The unit will be published electronically to allow teachers to modify, adapt and innovate learning activities relevant to demographics of a particular class group.

The unit has been planned in collaboration between teachers from Marrickville West Public School, the Committee of Walking on Water (WOW) and consultants from Marrickville Council.

Background

In 2011 Marrickville West Public School was approached by the Committee of Walking on Water (WOW). WOW wanted the Marrickville West Public School community to develop an understanding of the Riverside Crescent Subcatchment water cycle and its relationship and impact on the Cooks River.

Also occurring at Marrickville West Public School was a collaboration with the school, Marrickville Council and the Community Gardeners to build a rain garden on school land. The rain garden, to be constructed later in 2012, will filter out pollution in stormwater runoff from the Henson Street area that normally ends up in the Cooks River. The water will be stored in a tank to use on the school's land and community garden.

The decision was made to integrate into the school curriculum the two initiatives from WOW and Marrickville Council. A collaborative meeting involving the school, WOW and the council involved a sharing of ideas about content and activities for the curriculum and included the naming of the unit, We are all a Cooks River People. This ten week unit will be implemented in Term 3.

A highlight of the unit of work will be a water festival at Marrickville West Public School towards the end of Term 3. This will be organised by WOW and involve the students sharing learning including art and projects. The festival will also be a time to launch the rainwater garden.

Special Thanks to...

Damien Moran Co-ordinator

Softly Dunstan Designer

Leann Thomas artist & photography on cover www.leanne1966.wordpress.com

Nicholas Nicola lithograph at top of each page www.nicholasnicolaetchings.synthasite.com

Marrickville Council

Project WOW – Walking on Water



1. ACTIVITY ONE

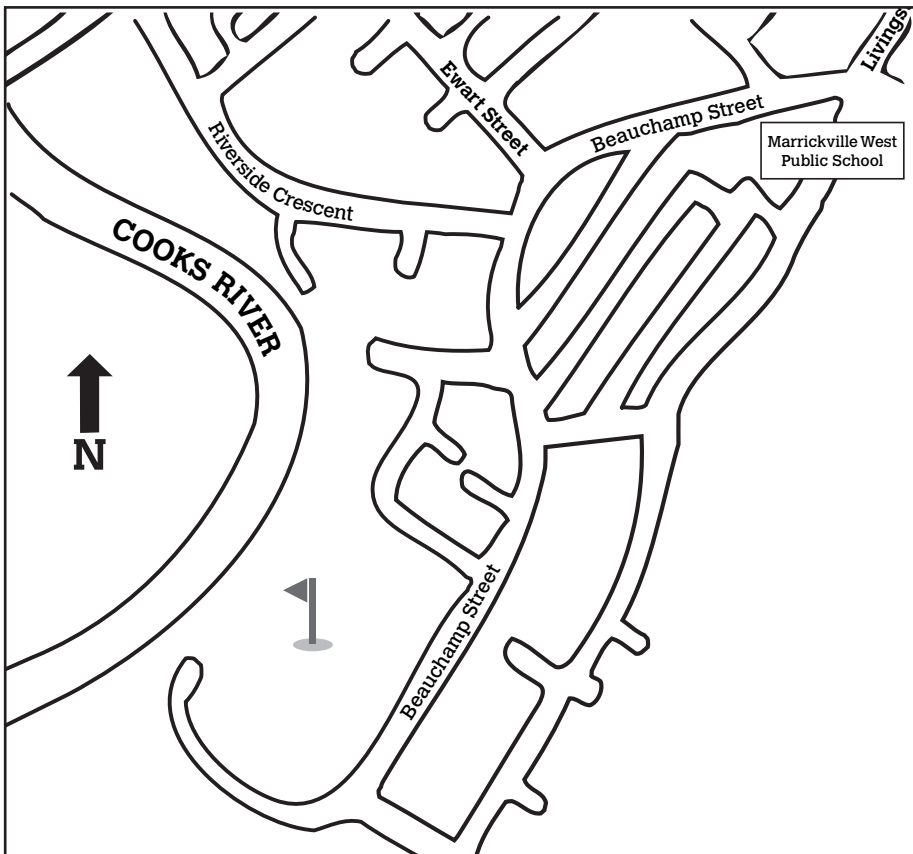
Describe a personal relationship with the Cooks River

The Cooks River is a 23 kilometre long urban river of south-western Sydney. It empties into Botany Bay. Marrickville West Public School is about 1km from the Cooks River. It takes about 10 – 15 minutes to walk this distance.

 Colour the Cooks River: Blue


 Colour Marrickville West Public School: Red

 Colour: Green the walking route from Marrickville West to the Cooks River



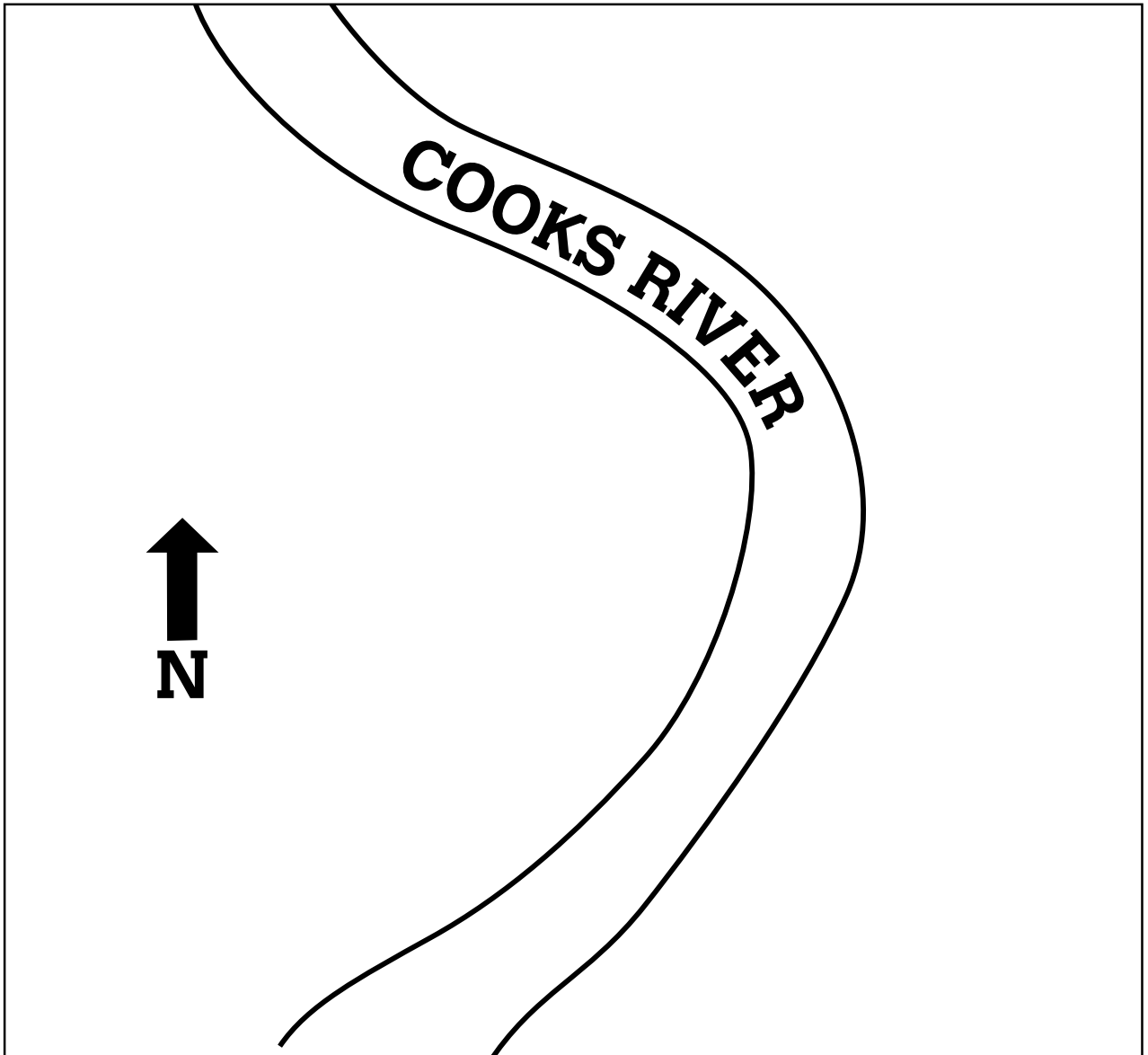
List some reasons why you would go down to the Cooks River.


What is your home address?


 Use Google to find out how far away you live from the Cooks River and how long it would take to walk.



There are many things to do on the Cooks River.



-  On the map draw:
- A cycle path to follow along the riverbank
 - A soccer field

-  Use the Cutting Page to:
- paste on the cyclist & the jogger
 - paste on the soccer players

Then:

- Choose somewhere for the coffee shop & picnic and paste on the pictures.

Enjoy the Cooks River!



We are all
**COOKS RIVER
PEOPLE**


2. ACTIVITY TWO

Recount the history of the Cooks River

Cooks River is also called the River of Goolay'yari from the Pelican Dreamtime Story. In the story the Pelican stepped across the river and left his footprint – the small island near the rail bridge at Tempe which once formed the shape of a Pelican footprint.

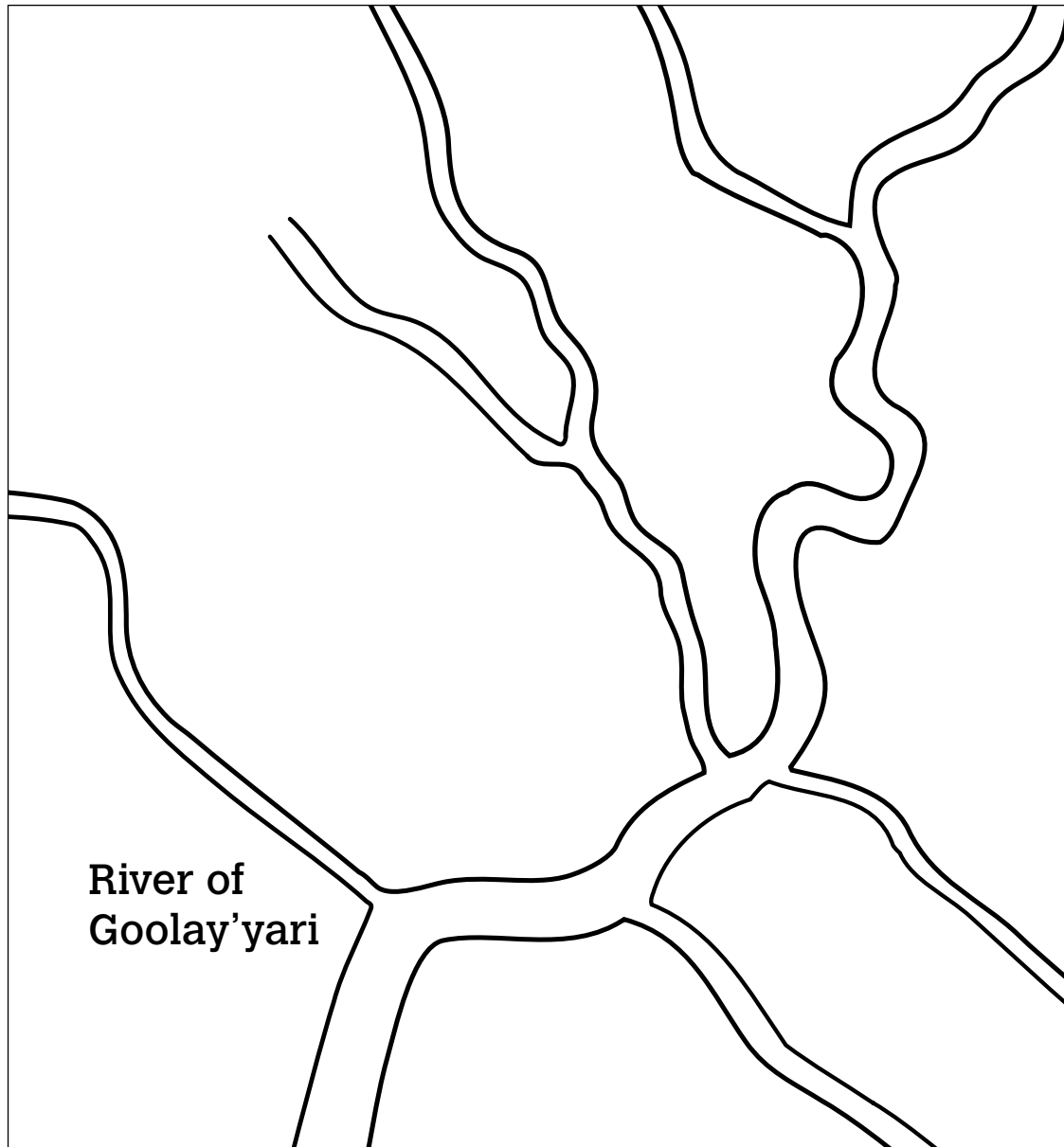



A pelican footprint


 Draw and colour an island in the shape of a pelican footprint.




Australian families, the Cadigal & Wangal people, have lived close to the Cooks River for thousands of years. They depended on the river for work and leisure. It was their home.



 Copy the symbols onto the map to show a busy & traditional family life for the Cadigal & Wangal people. You may use the same symbol as many times as you want.

 Also use the Internet to locate other symbols.


footprints


camp site


person


spirit ancestor


fish


boomerang


journey path


canoe



water hole



England invaded Australia in 1788. The English were here to stay and gave new names for much of what they saw. The River of Goolay'yari was renamed the Cooks River after Captain Cook.

The English had come to stay and started to expand.

In 1810 the English would go to the Cooks River near Tempe to have picnics, to go boating and to get timber. You could even swim in the river.

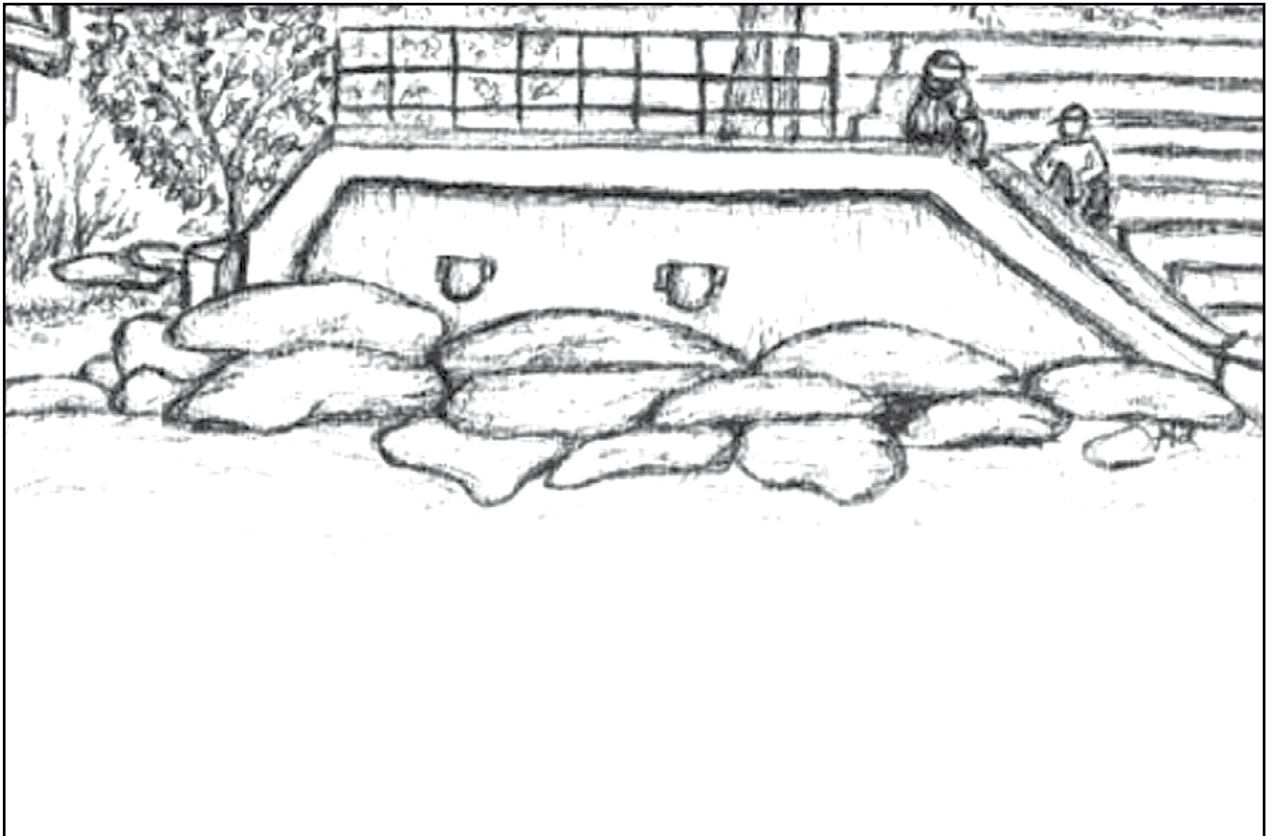
 Draw people having picnics, on boats and swimming at the river.

What did the Australian families who lived along the river think about these English intruders?



As Sydney became a city the natural environment gave way to the expanding city.

Factories were built along the Cooks River. They badly polluted the river. Concreting of the river banks occurred in the 1940's.



 Draw and colour the polluted water from a factory pouring out pipes into the river.

Over recent years efforts have been made to care for the Cooks River. The condition of the river has considerably improved.

How many bridges cross the Cooks River?

Today about 500 000 people live in the Cooks River Catchment area.

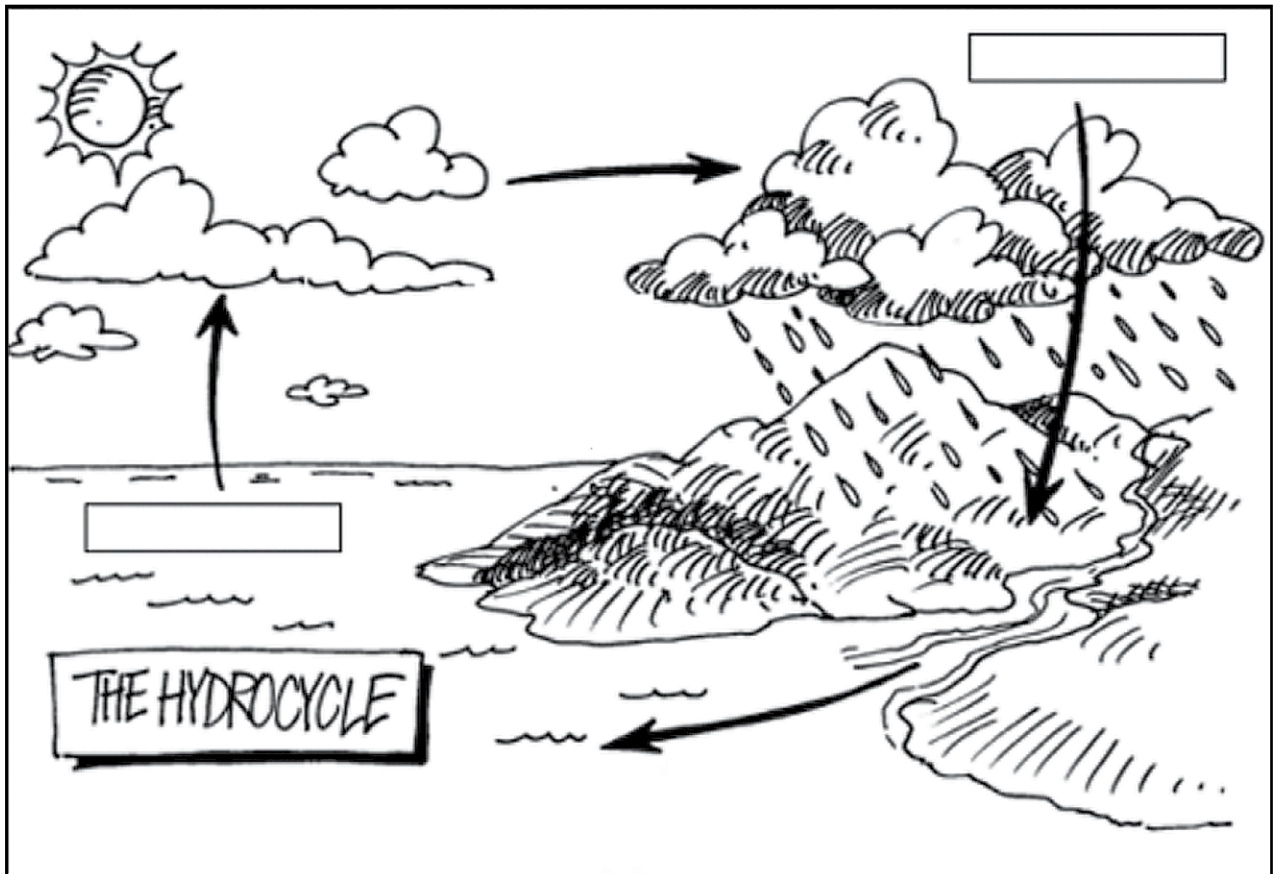
Enjoy the Cooks River!




3. ACTIVITY THREE

Understand a water system

The Water Cycle is the journey water takes as it circulates from the land to the sky and back again.



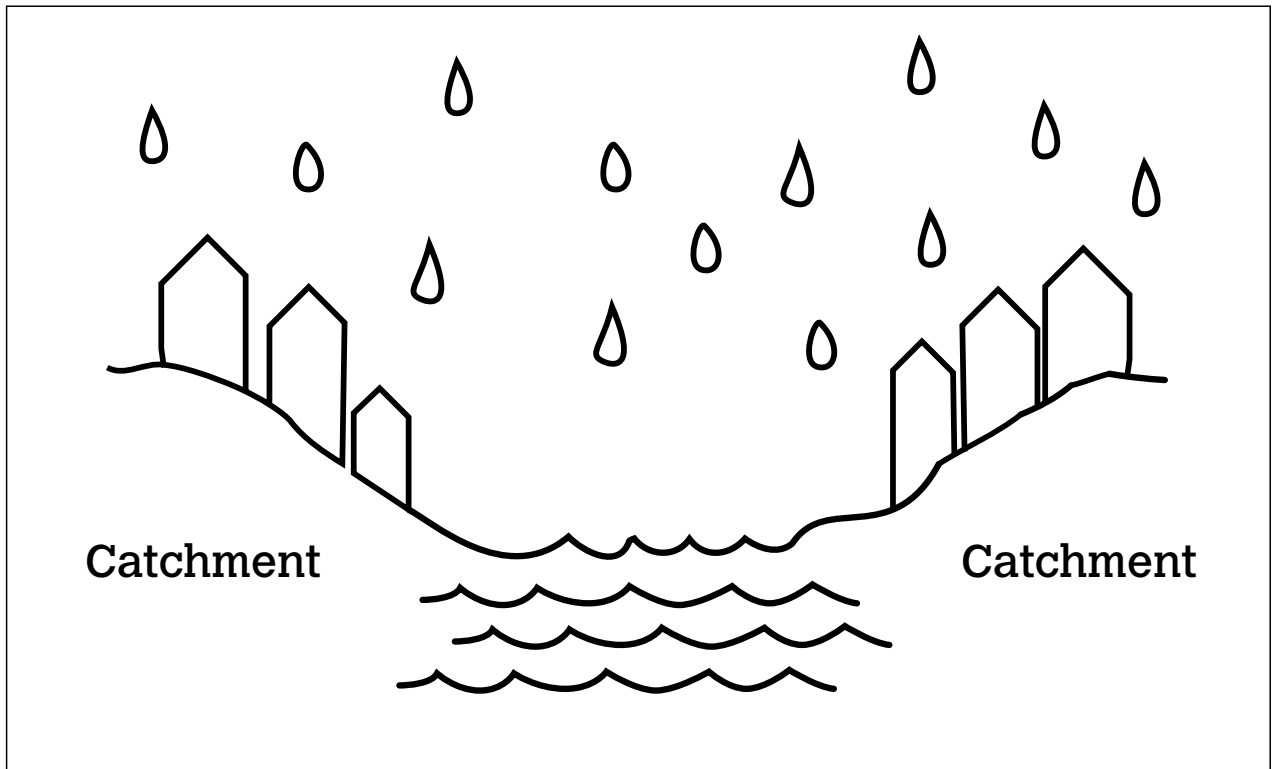
 Add these words to the picture of the Water Cycle or Hydro Cycle:


evaporation precipitation





What is a catchment area?

A river is like a baseball player. It catches water from the land.



 Colour the river: dark blue

 Colour the catchment area for the river: light blue

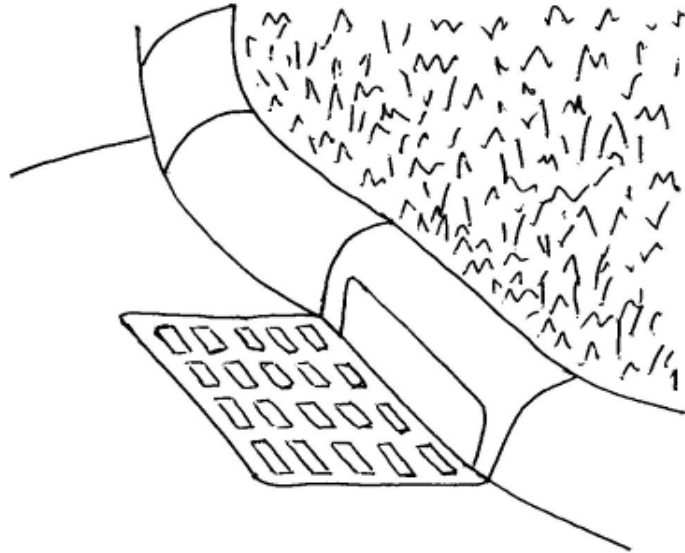
 Draw two arrows, each facing towards one of the sides of the river, to show how the water travels from the catchment area to the river.





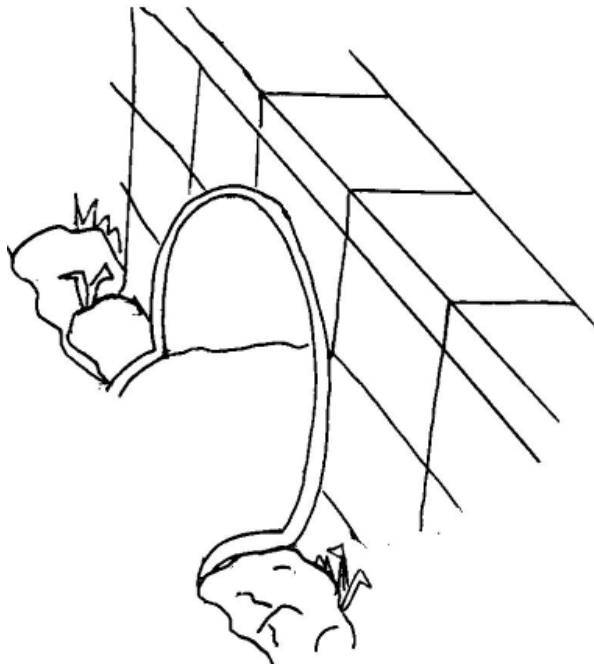
When rain falls over your house, how does it get to the river?
It flows into the gutter, down a drain, along a pipe and into the river.

From street:



 Draw water flowing along the gutter and into the drain (storm water pipe).

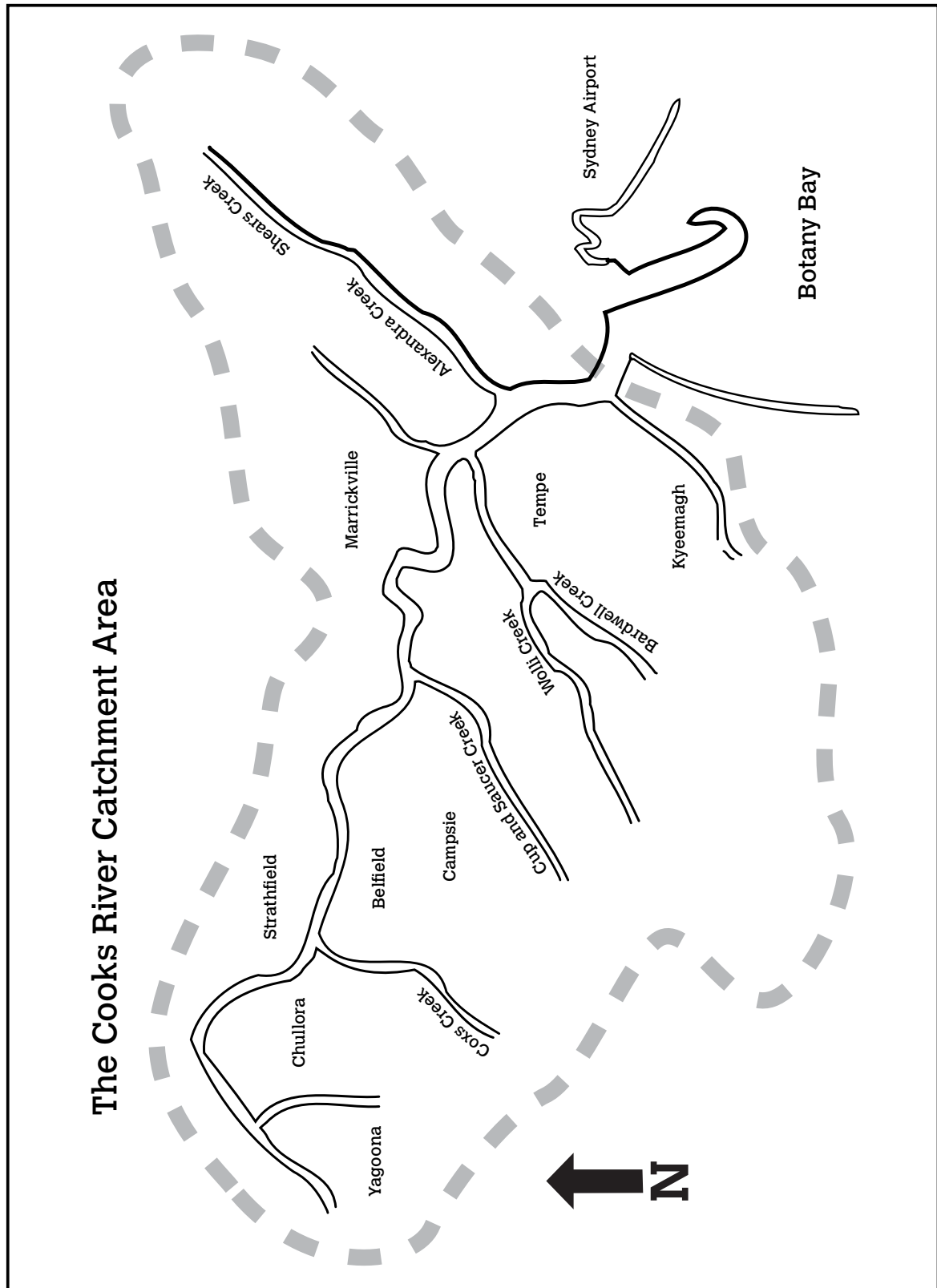
To river:




 Draw water flowing out of the drain (storm water pipe) and into the river.



The Cooks River has a catchment area of about 100km²

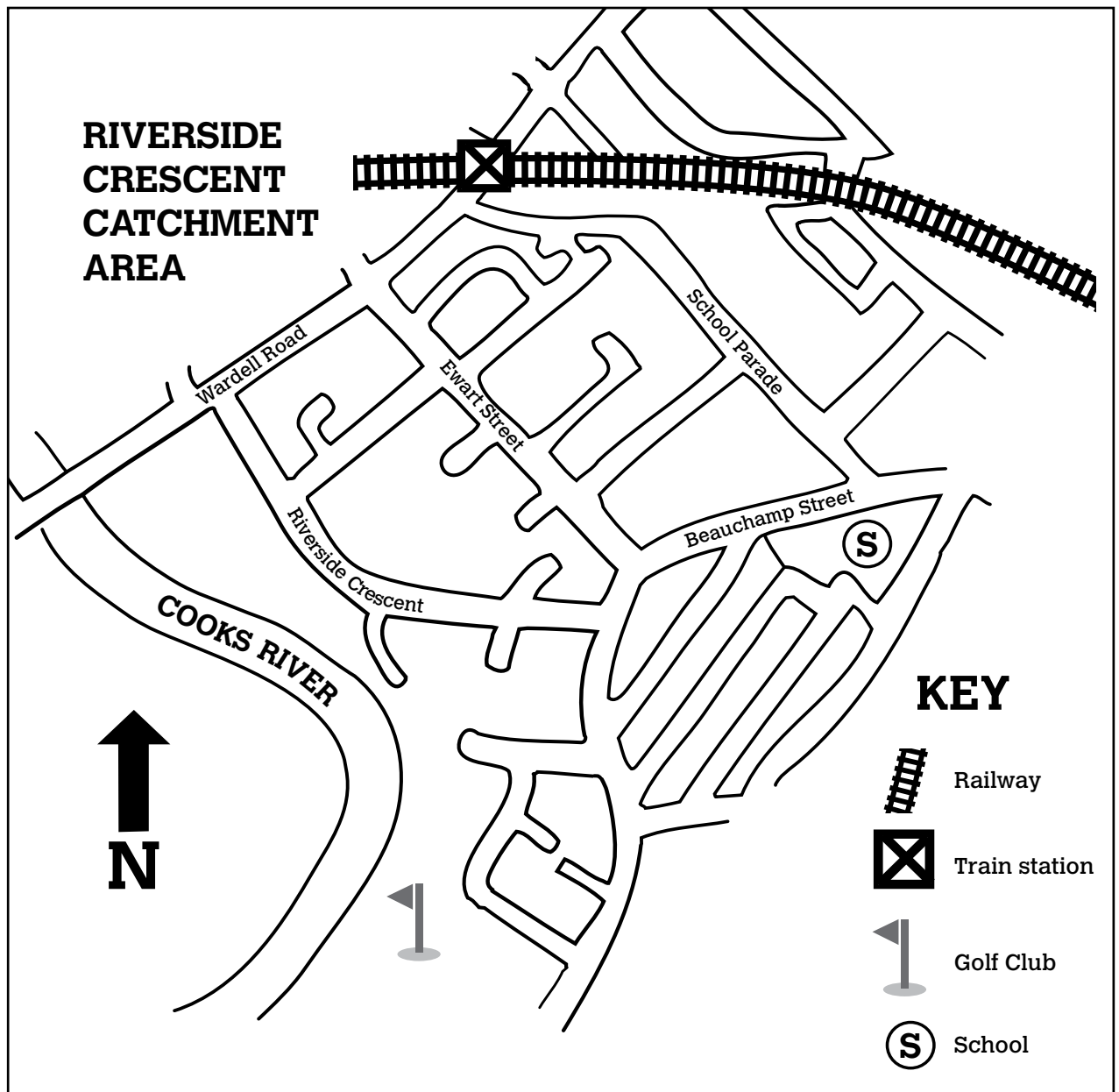


 Colour the Cooks River catchment area: light blue.

 Colour the Cooks River and its tributaries: dark blue.



Marrickville West Public School is in the Cooks River Catchment Area.



The school is located in the Riverside Crescent Subcatchment.

Colour the Cooks River: dark blue

Colour the school: orange

Enjoy the Cooks River!



We are all
**COOKS RIVER
PEOPLE**

4 ACTIVITY FOUR


Describe the biodiversity of the Cooks River

**Biodiversity is the variety of life in the world
or in a particular habitat or ecosystem.**



www.savenature.org



 Use the Internet to find images of biodiversity on the Cooks River.

Grey Headed Flying Fox

Eastern Bentwing Bat

Green & Golden Bell Frog

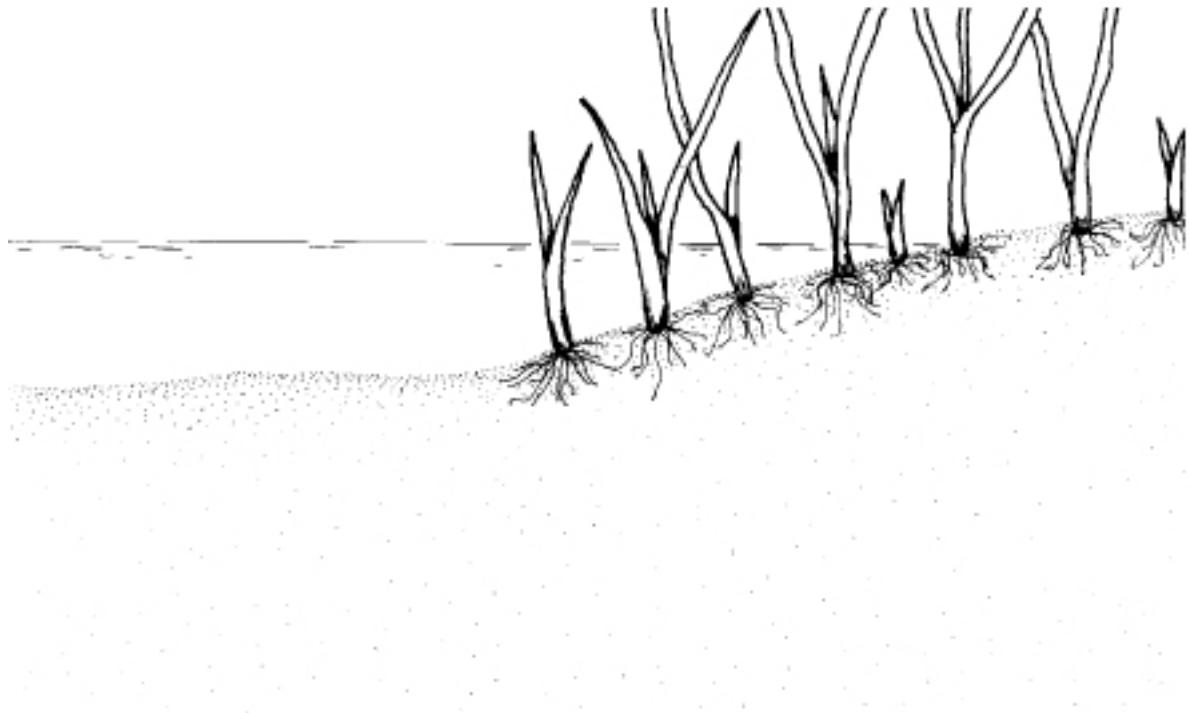


A salt marsh is the area of the river where the fresh water meets the salty water from the sea.




Once people thought saltmarshes were waste areas: smelly, dirty and of no use. They would destroy them believing them to be worthless!

**During high tide the saltmarsh gets covered with salt water.
The plants that live in a salt marsh need to be able to live in the salt.**



On the next page, complete the activity using the Cutting Page:

Complete the picture of the salt marsh by:

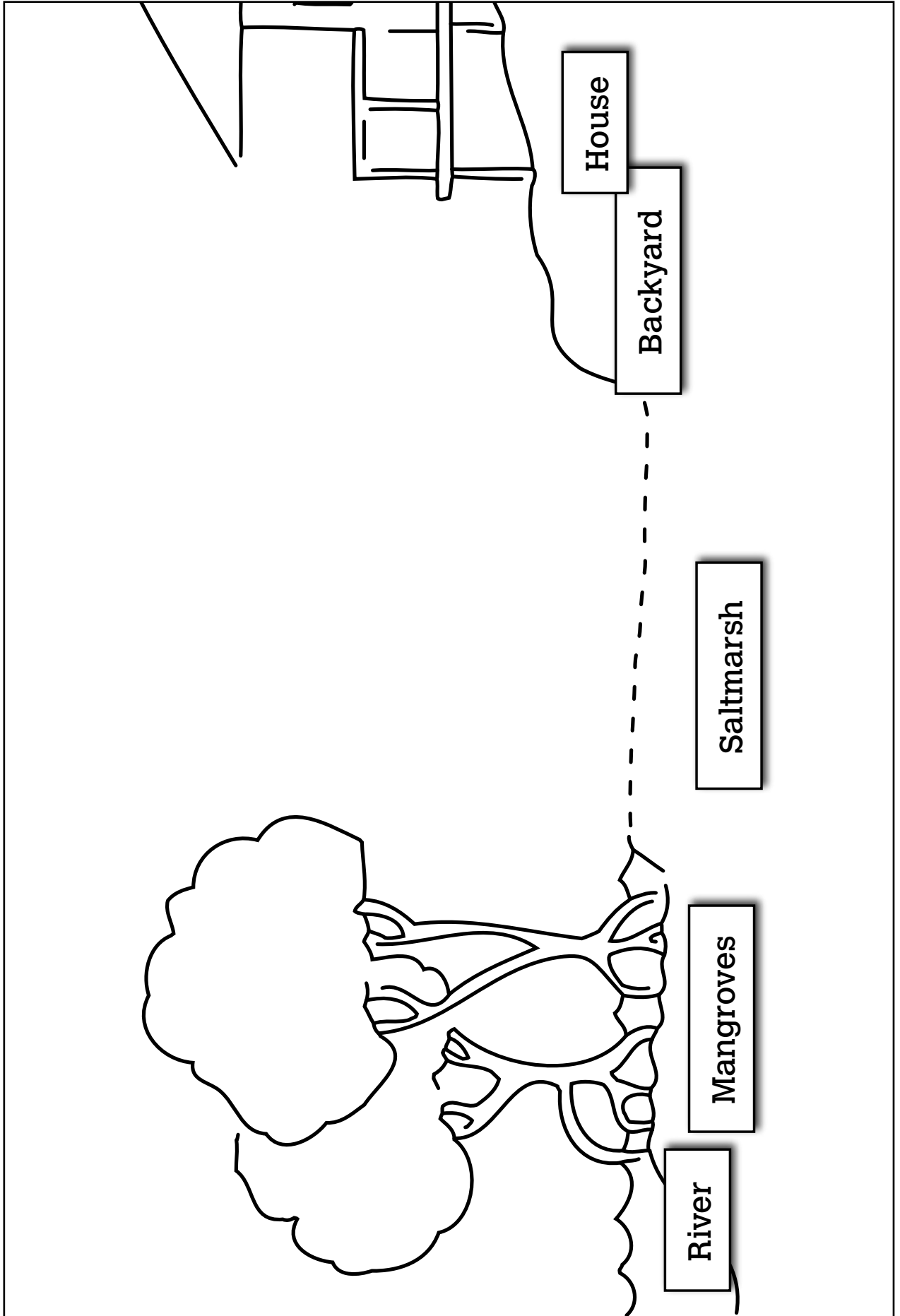
 Cutting out and pasting the flora and fauna (or copy them)

 Draw some native plants in the back yard of the house

 Draw the salty water of high tide covering the saltmarsh

 Colour neatly.

Enjoy the Cooks River!





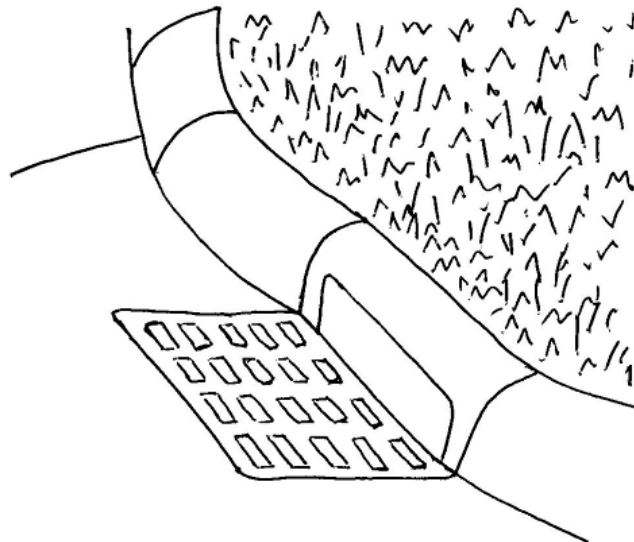
5. ACTIVITY FIVE

Understand water quality

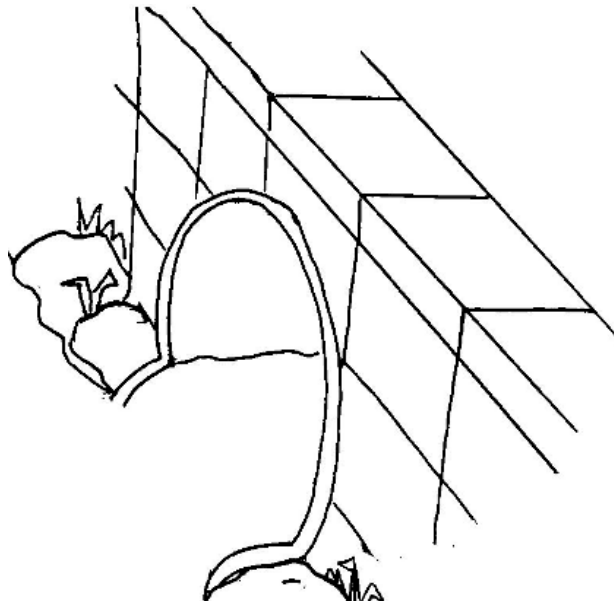
The Cooks River is regarded as one of the most polluted urban rivers in Australia.

✂ Using the Cutting Page, complete each picture to show how rubbish travels from the street to the river.


From street:



To river:





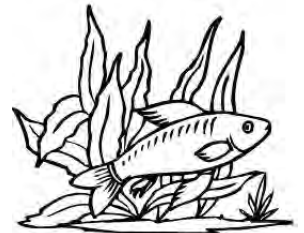
 Complete the text by filling in the missing words:

river animals play quality

Water _____ makes a _____ healthy.

Water _____ is important for marine life, plants, _____ and birds.

For humans, water _____ means that we can use a _____
for things like drinking and _____.




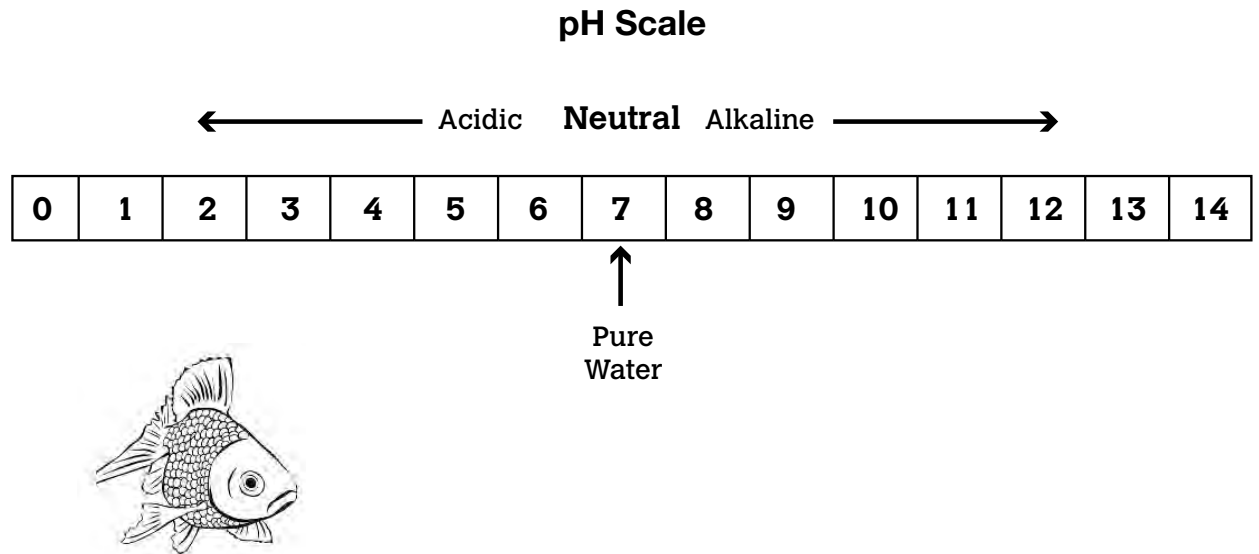
WATER QUALITY : *Scientists look at the water to see if it is good, then we can use it.*



Find out the quality of water by testing the pH

Freshwater fish thrive in a pH range between 5 and 7.

 **Shade the numbers on the scale to show the pH range that freshwater fish live in.**



Enjoy the Cooks River!




6. ACTIVITY SIX

Rehabilitating a damaged water system

In Australia it is now an environmental crime to dump pollutants such as oils, chemicals, sewage and garbage into a river.


This old car is leaking oil onto the driveway.

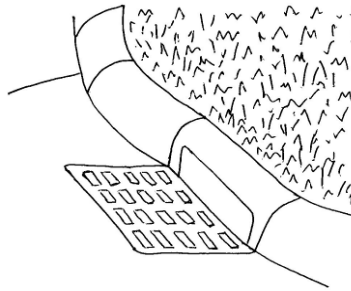
On the driveway:

 Draw rain falling which will wash the oil into the gutter. Colour the oil leak under the car: black.




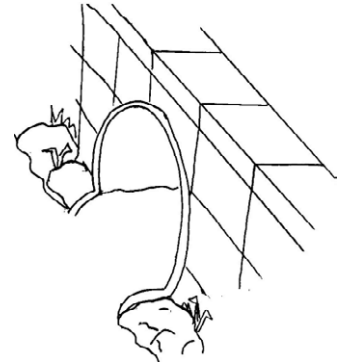
Into the street:

 Draw the oil from the car being washed down the gutter and into the drain.



Into the river:

 Draw the oil from the car now being washed out of the storm water pipe and into the river.




Think of a way to protect the river from the leaking car.
Use a diagram or write a description to explain your idea or ideas.

Why is oil in the river bad for the environment?



The Cooks River was originally a natural river. The Cooks River Improvement Act of 1946 led to concrete panels being built along the 'unruly' natural river banks. This resulted in the loss of the river's natural environment and the creation of the concrete channel we see today.

 Use Google images to locate a photograph showing the concrete walls of Cooks River.

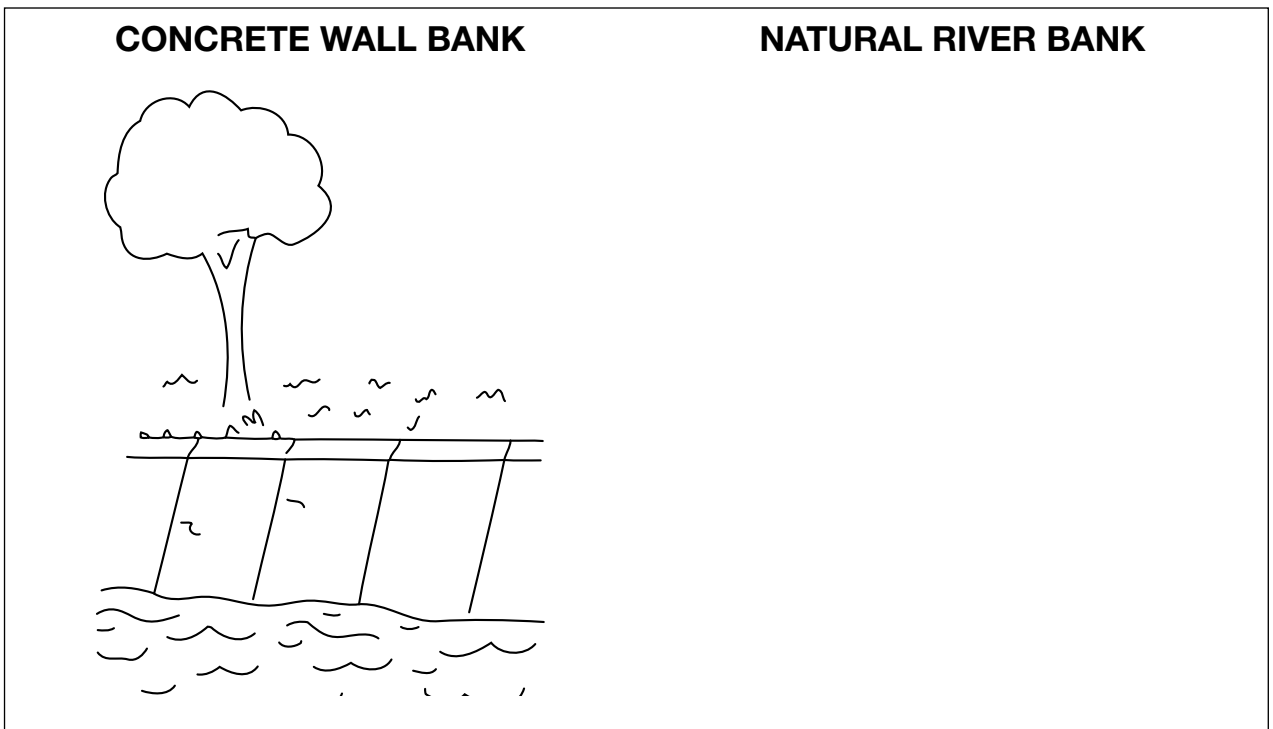
A project is underway to naturalise parts of the Cooks River's banks.

Riverbank naturalisation generally involves:

- removing the steep concrete bank.
- creating a more gently sloping river bank.
- creating a river bank using native plants, trees and rocks.

Benefits include a softer landscape feel and can greatly improve the riverbank habitat for native birds and other animals.

 Redraw the river bank to show how it can be naturalised.



Enjoy the Cooks River!

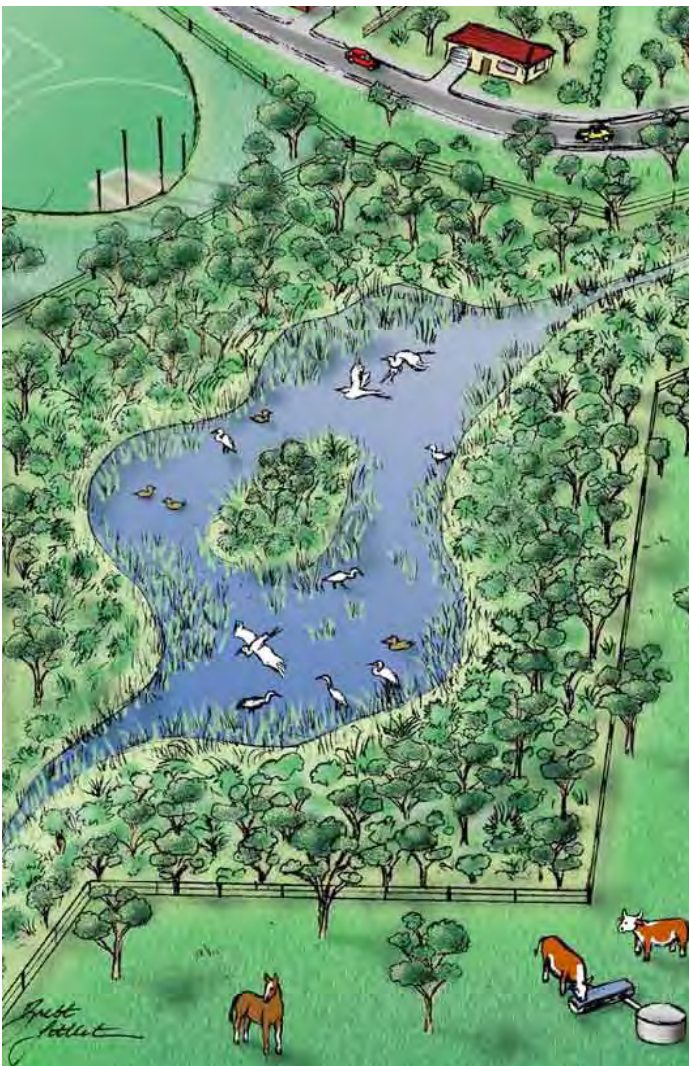


7. ACTIVITY SEVEN

1. Plan for a sustainable future

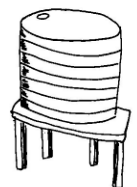
It is very healthy to the environment to store rain water or storm water.

 Tick the statements that are true:



- Rainwater can be stored in a wetland, a pond, a rain garden and tank.
- Rainwater can be stored for times of drought.
- Storing rain water can reduce the impacts of floods.
- Storing rain water can absorb pollutants.
- Storing rain water can provide a habitat for animals and plants.
- Storing rain water can have historical significance for Aboriginal people.
- Storing rain water makes for a more beautiful environment.

Rain water stored in a tank can be used around the house.
Can you think of one use?

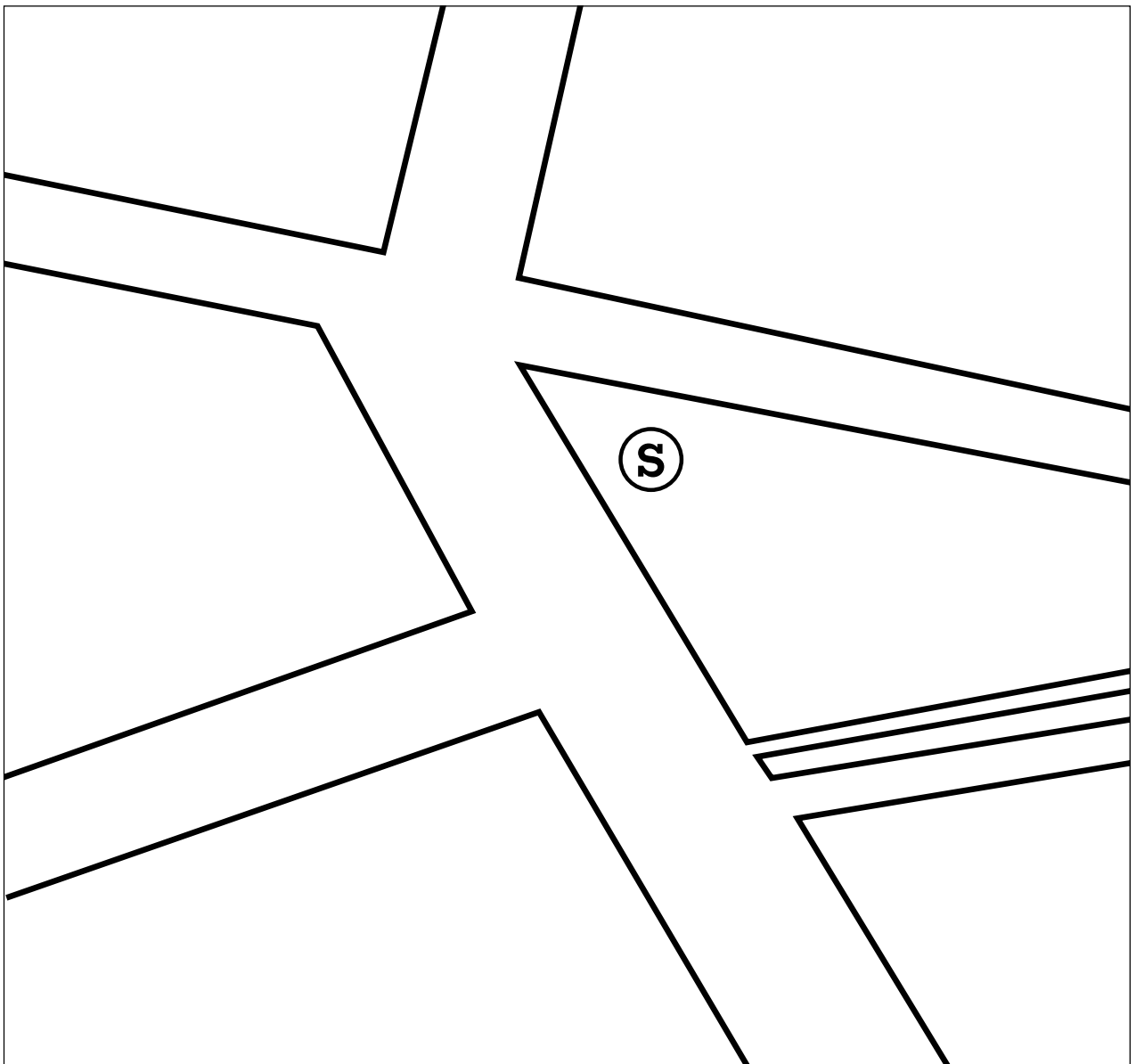




A rain garden is being built in the playground at Marrickville West Public School. When it rains, rain water will run down from the catchment area of Henson Street. The rain garden will filter out pollution in this rain water that normally ends up in the Cooks River. The rain water will be stored in a tank to use on the school's land and in the community garden.


When it rains, water flows very quickly down Beauchamp Street, into the gutter and into the Cooks River.

 Draw a rain garden to store the rain water.



Enjoy the Cooks River!



 Colour and decorate the text.

We live, work and learn
in the catchment area for
the Cooks River.

We must be very careful
what we allow to travel from our
homes, our schools, our shops, our
roads and our playgrounds into
our river.

When rain falls in
our catchment,
we must respect it and
help to nurture and sustain
the natural environment.

**We are all
Cooks River people.**

Together we must care for this
beautiful waterway and its surroundings.

ADDITIONAL RESOURCES

Here are some resources and recommended websites

 **Marrickville Council Biodiversity LINK**

http://www.marrickville.nsw.gov.au/environment/in_your_community/biodiversity.html?s=0

 **Cooks River – Royal Botanic Gardens & Domain Trust LINK**

http://www.rbgsyd.nsw.gov.au/science/Evolutionary_Ecology_Research/Botany_of_Botany_Bay/places/cooks_river

 **Planning Riverside Crescent Subcatchment LINK**

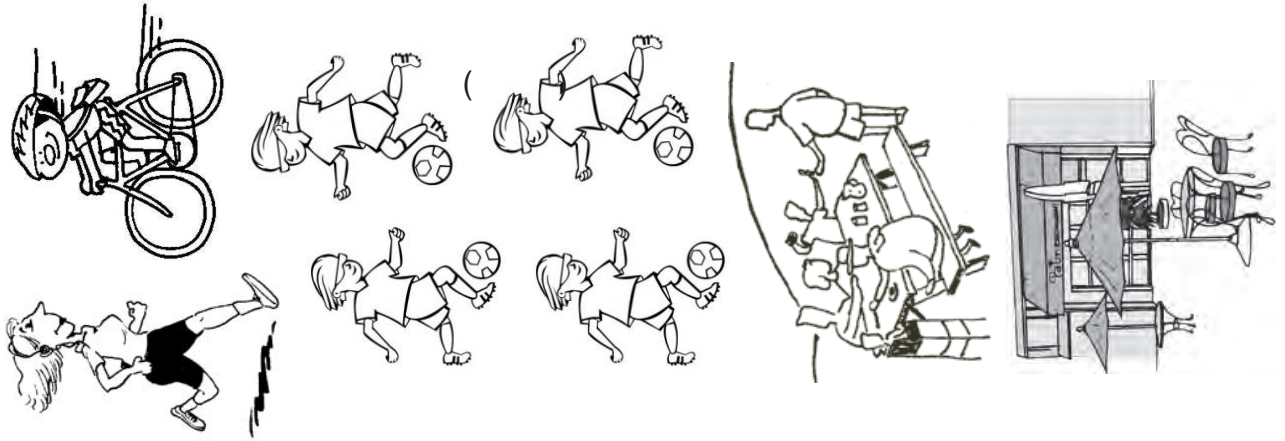
<http://www.marrickville.nsw.gov.au/MARRICKVILLE/INTERNET/RESOURCES/DOCUMENTS/pdfs/DraftRiversideCresSubcatchmentManagementPlan.pdf>

 **Cooks River Valley Association LINK**

<http://www.crva.org.au/>

CUTTING PAGE

Activity 1



Activity 4



Plant the Glasswort (*Sarcocornia quinqueflora*) in the saltmarsh



Saltmarsh Water Snake

Insect Eating Bat

Wading Bird

Crustacean

Fish

Move the animals and insects into their new home in the saltmarsh.

Activity 5

