healthy habitats

student workbook 1

Burnett Mary
REGIONAL GROUP
Practical Solutions for Natural Resource Management

All I can find at my local creek

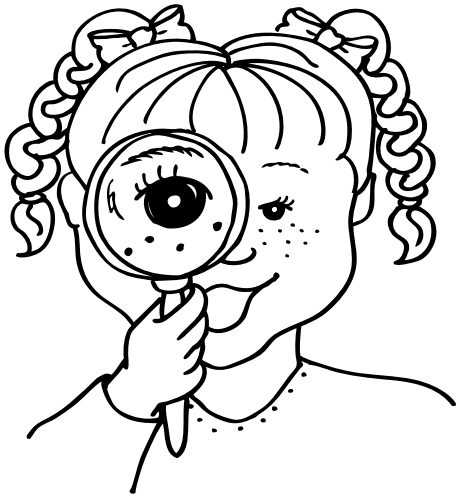
NAME: . . . . . .

Let's Start Investigating

If you want to look after your local creek, you must first find out all about it.

A healthy creek, or waterway, can look different in different environments, or at different times of the year. A creek in the outback will look different to a creek in a rainforest.

It is your mission to find out everything you can about your creek so you know if it is healthy, fix it if it is sick, and then keep it healthy.



My Creek's Catchment-1

A catchment is all the land where the water falls and drains. We all live in a catchment and we all need to look after our catchments. Find out more about your creek's catchment.

My creek's name is: . . . . . .

I live in: . . . . . and it is:

- ☐ at the top of the catchment
- ☐ in the middle of the catchment
- ☐ at the end of the catchment

Where does the water in my creek come from?

My creek starts at: . . . . . .

A feature upstream of me is: . . . . . .

Where does the water in my creek go?

My creek ends at: . . . . . .

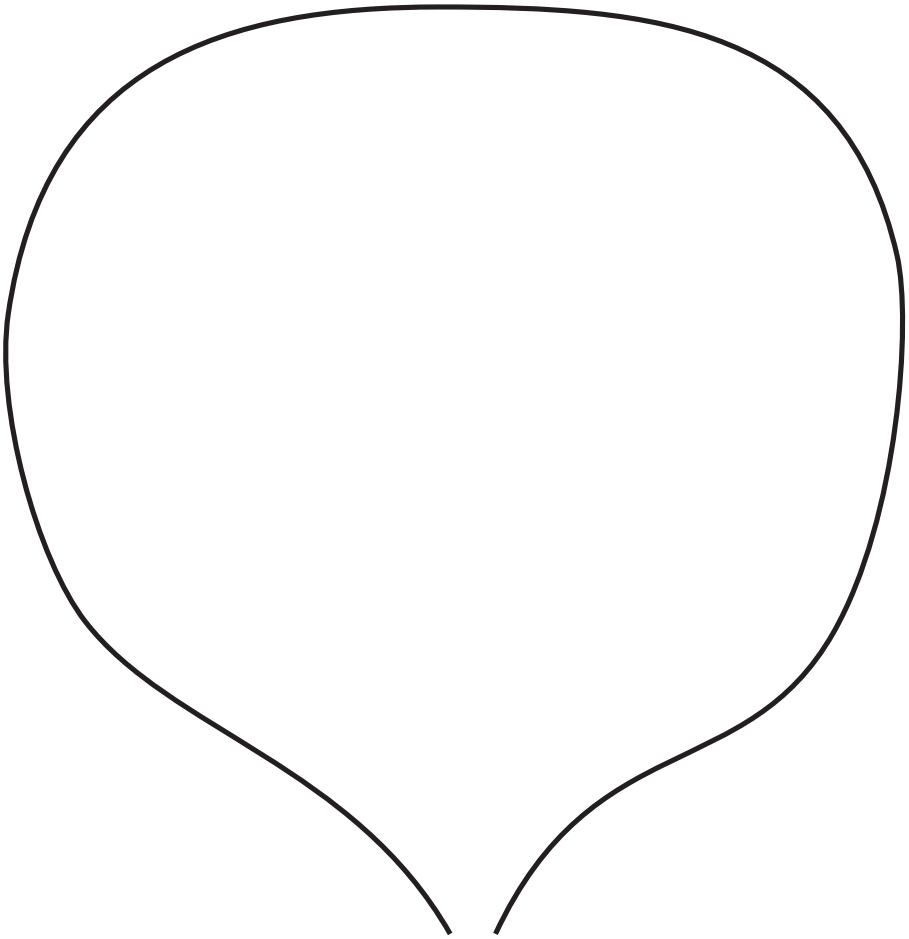
A feature downstream of me is: . . . . . .

My creek flows into: . . . . . .
(this can be a river, lake, dam or ocean)

My Creek's Catchment-2

Draw a simple diagram of your creek's catchment and label significant features like towns, roads and dams. Use a road map to help you.

Top of the Catchment

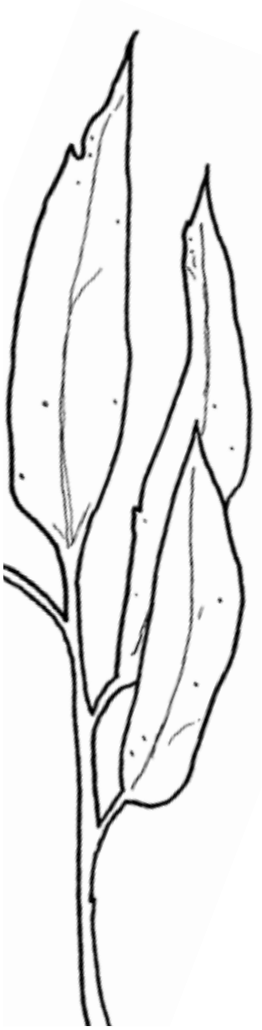


End of the Catchment

Is my habitat healthy?

A healthy habitat provides all the things that plants and animals need. Tick the boxes that describe your creek bank's habitat.

HABITAT	NONE	SOME	LOTS
Trees			
Shrubs			
Ground Cover			
Leaf Litter			
Rocks			
Logs			
Tree Hollows			
Flowering Plants			
Water			



Unhealthy Habitats

Pollution can be caused by throwing away litter. It plays a big role in creating unhealthy habitats.

How many types of pollution can you see at your local creek? (e.g. glass, plastic bottles, paper, oil)

_____

_____

_____

Can some of this pollution be recycled?

☐ no

☐ yes, how?

_____

What are some ways your pollution can affect local plants and wildlife?

_____

_____

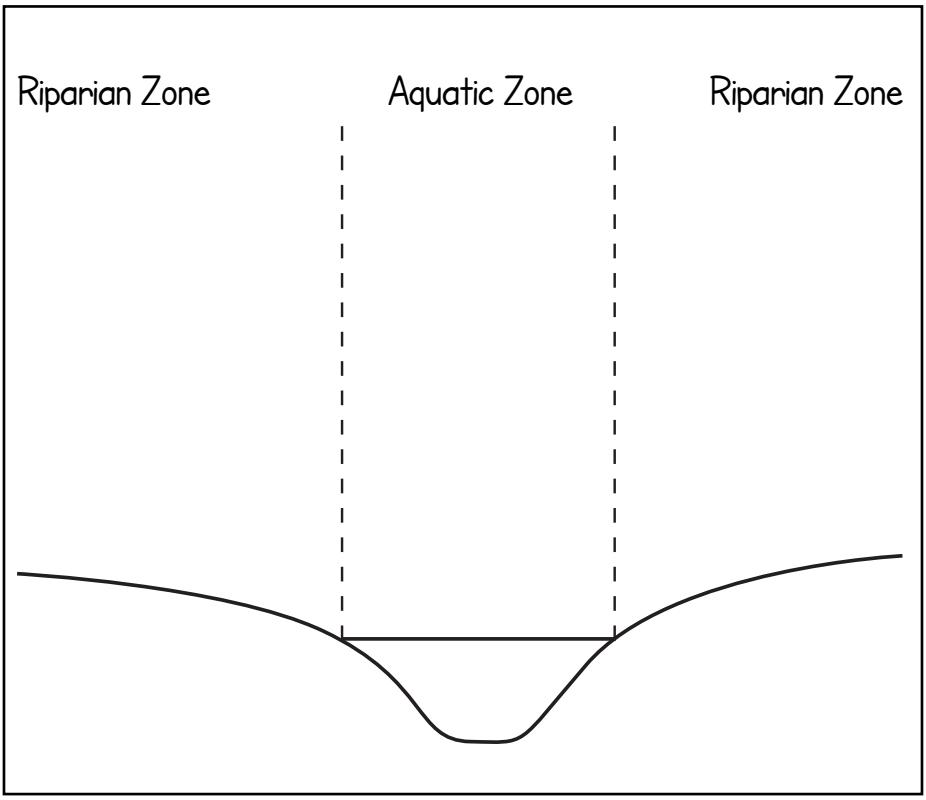
_____

Riparian Rapture

The riparian zone of a waterway extends to any land that adjoins or directly influences a body of water. It includes:

- the land immediately next to creeks and rivers;
- gullies and dips which sometimes run with water; and
- wetlands and river floodplains which interact with the river in times of flood.

Draw and label a cross section of your creek's riparian zone.



A Watery World

Draw a picture of a water plant found in your creek.

My water plant lives:

- ☐ On top of the water
- ☐ Under the water
- ☐ On the waters edge

My plant is

- ☐ tall
- ☐ flat

My plant can float

- ☐ Yes
- ☐ No

Name an animal that might use my water plant for food or shelter:

_____

My Favourite Native Tree

My tree looks like...

My tree is . . . . . metres tall

My tree has . . . . . coloured leaves

My tree smells like . . . . . .

Seeds

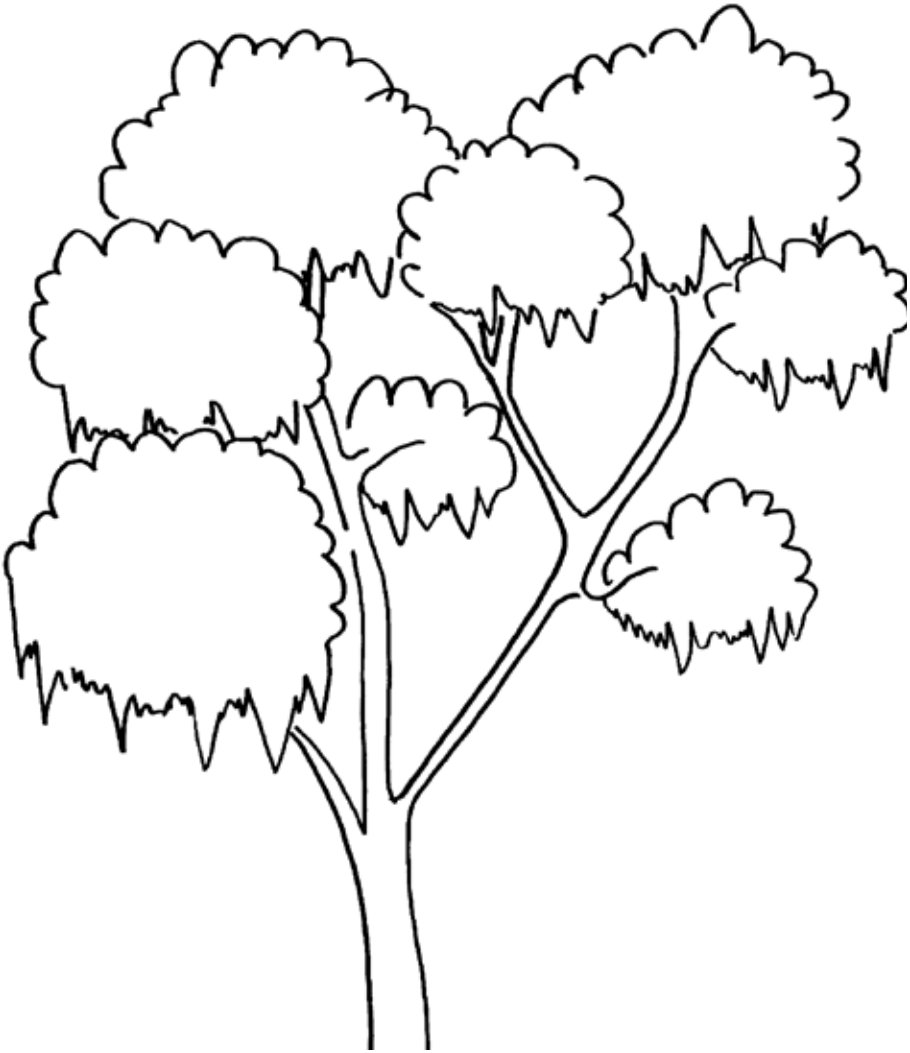
Flowers

Bark or Leaf rubbing

My favourite native tree is a . . . . . .

Canopy Capers

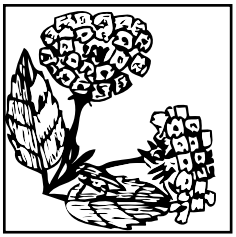
In the bush, the canopy is the highest level of vegetation. What is in your canopy? Draw what you see on the diagram.



Friend or Foe?

Australian native plants are those that originated in Australia. We also have many introduced, or non-native, plants. Some of these get out of control and we call them weeds.

How many weeds can you find and what do they look like?



A Lantana

E

B

F

C

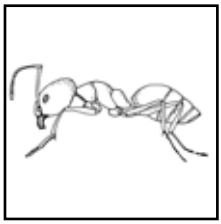
G

D

H

Going Bug-eyed

Insects play an important role in nature as pollinators and decomposers. Record as many insects as you can. Draw other insects in the spaces provided.



Ant:

Bee:

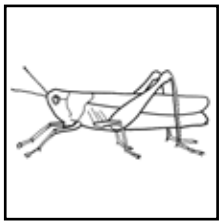
Beetle:

Butterfly:

Centipede:

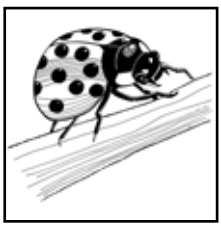
Dragonfly:

Spider:



Grasshopper:

Caterpillar:



Lady Beetle:

Snail:

Moth:

A Fishy Tail Tale

Find out what native fish might be in you creek. Write a short poem or story about one of these fish. Make sure to include its name, what it eats and where it lives.

Water Bug Collection

Catch and collect as many water bugs (macro-invertebrates) as you can and tally your results below. The more sensitive bugs you find, the healthier and cleaner the water is. No sensitive bugs indicates that the water is very polluted.

Very Sensitive Bugs	
Stonefly Nymph	
Mayfly Nymph	
Sensitive Bugs	
Alderfly Nymph	
Caddisfly Nymph	
Water Mite	
Tolerant Bugs	
Beetle Larvae	
Water Strider	
Dragonfly Nymph	
Yabby/Craybob	
Whirligig Beetle	
Damselfly Nymph	
Fly Larvae	
Mussel	
Sandhopper	

Shrimp	
Midge Larvae	
Nematode	
Water Scorpion	
Very Tolerant Bugs	
Diving Beetle	
Flatworm	
Slater	
Worm	
Hydra	
Waterboatman	
Water Treader	
Backswimmer	
Bloodworm	
Snail	
Leech	
Mosquito Larvae	

Sensitive Bugs Found:

Tolerant Bugs Found:

Water Testing

As well as looking at macro-invertebrates (water bugs), we can conduct other tests that tell us if our creek water is healthy. Record your results here.

Water Temperature _____°C Air Temperature _____°C

☐ 18-22 °C	Supports fish spawning	Ex/Very Good
☐ 15-17°C or 23-24 °C	Moderate	Fair
☐ >25 °C or <15 °C	Warm or Cold	Poor

Turbidity _____ NTU

☐ <10 NTU's	Ex/ Very Good
☐ <30 NTU's	Fair
☐ >30 NTU's	Poor

pH _____

☐ 6 -8 or 7	Neutral	Ex/ Very Good
☐ <6	Acid	Poor
☐ >8	Alkaline	Poor

Salinity: _____

☐ < 250 mg/L = <100µS/cm = <0.1 mS/cm	Ex/ Very Good
☐ <500 mg/L = <800µS/cm = <0.8mS/cm	Fair
☐ >500mg/L = >800µS/cm = >0.8 dS/cm	Poor

Who uses the creek?

There are many creatures that use the creek. They include plants, wildlife and humans. Knowing your users helps you to look after your creek better. Have a look at your local creek, identify the users and find out how they impact the creek (in a good or bad way).

Plants	Impact
Wildlife	Impact
Humans	Impact

Who's on the menu?

A Food Chain is a 'chain' of organisms, through which energy is transferred. Each organism in the chain feeds on and obtains energy from the one preceeding it. Multiple chains create a web. Show the energy flows by connecting the plants and animals below to create a watery food web.


algae


reeds


water plants


mosquito


water boatman


freshwater snail


turtle


fish


black swan


fish


frog


dragonfly


diving beetle


pelican


duck


heron


lizard


bacteria


yabby


worm

Adapted from Waterwatch Adelaide & Mount Lofty Ranges

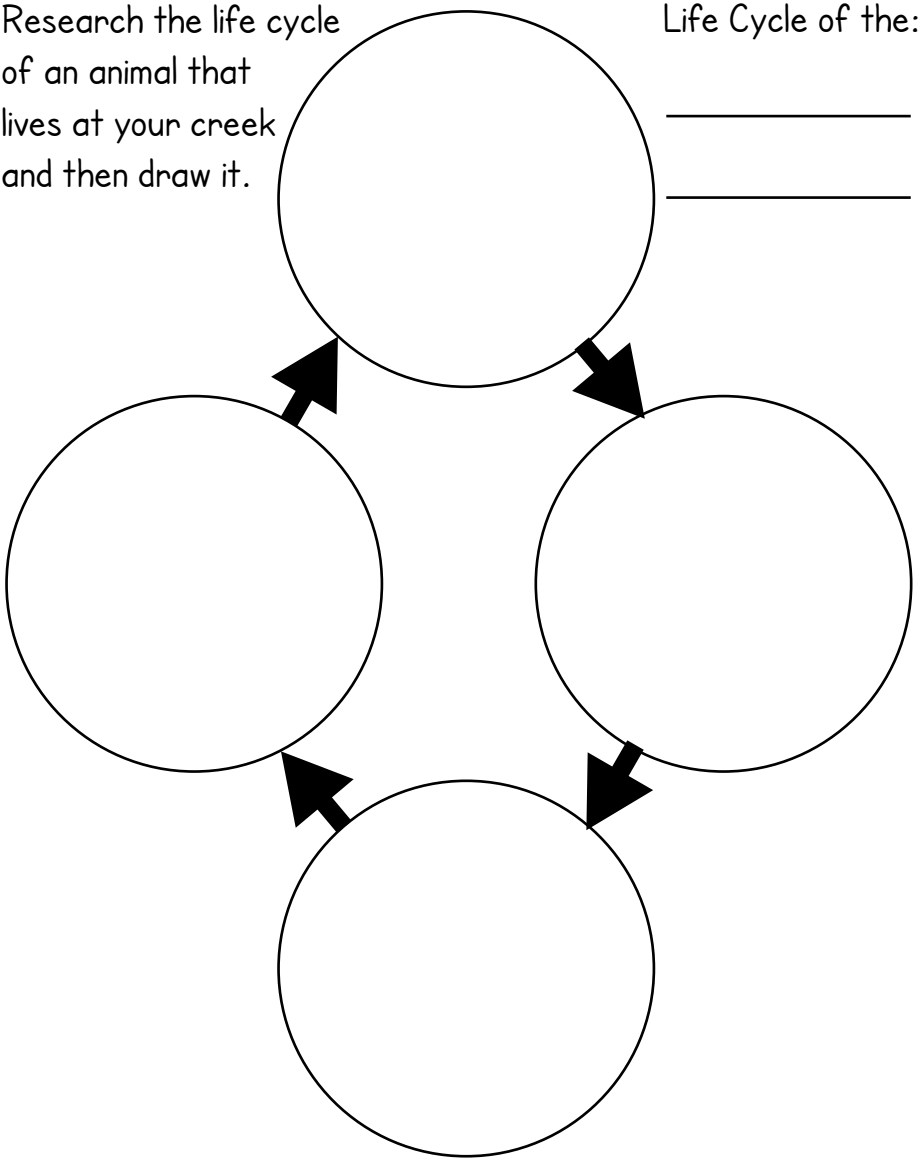
Life Cycles

Research the life cycle of an animal that lives at your creek and then draw it.

Life Cycle of the:

_____

_____



A Unique Creek!

My creek is unique because ...

1. _____

2. _____

3. _____

4. _____

5. _____

Paste a photo of your creek here

Tell others about your creek and why it is unique!

Some Research Websites

- Burnett Mary Regional Group www.bmrg.org.au
- River Landscapes www.rivers.gov.au
- Basin Kids www.basinkids.com.au
- Reef Ed www.reefed.edu.au
- Waterwatch Queensland www.qld.waterwatch.org.au
- Healthy Waterways www.healthywaterways.org
- Landcare Queensland www.landcare.org.au
- Mary River Catchment Coordinating Committee mrccc.org.au

Burnett Mary REGIONAL GROUP
Practical Solutions for Natural Resource Management

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CARING FOR OUR COUNTRY