



Catchment Connections #1
Understanding Catchments

Catchment Capers

Background

Everyone lives in a catchment! Houses and schools are directly connected to waterways by the system of gutters and drains on roads. Anything left lying on roads, driveways and other hard surfaces can be washed into gutters, then down drains. These direct water into the nearest waterway which in turn runs into the main river or the sea. What we do at home impacts on waterways!

Each land use in the catchment has the potential to affect water quality. Catchment Capers highlights the role different land uses play in affecting catchment health.

Look at the map of the Onkaparinga River (at the back of this folder) and see how large the catchment area is. The area includes all the small creeks and drains that feed into the main river. Find your location on the map.

Land uses in the catchment are extremely varied. Brainstorm what land uses we might see in the catchment area. Examples from the hills include: orchards, dairy farms, vineyards, horse and cattle grazing, natural bushland. In the lower parts of the catchment: urban development, industry, high-density road networks, parks and gardens.

Activity outline

Give each student (or pair of students) a role-play card. Younger children will need help reading and understanding their role.

Ask each student or pair of students, to find pictures from a magazine or draw a picture of the

impacts their role can cause. Computer clipart could also be used (a good clipart site is <http://dgl.microsoft.com>). Alternatively, this could be done ahead of time.

Seat the students around the 'river' (a tarp, piece of cardboard or poster paper can be used for this) and explain that they are the catchment area for this river. Comment on how clean the river looks and that when it's clean, it's a good home for animals and a healthy place to play.

Go around the class and have each student read (or help them read) their role. Emphasise that some things get into the river by going 'into the gutter and down the drain', repeat this phrase as often as possible until the students join in. Discuss how that role would affect the water, then place the picture/s into the river. As more pictures accumulate, comment on how the water is looking, e.g. who would want to swim in /drink that water? Would it be a good home for animals?

When everyone has had a turn, discuss the problems of a polluted river not fit for swimming or fishing, poor habitat for aquatic life, could be smelly, could look bad. BUT for every pollution problem, there is a solution!

Go around the circle again and for each problem, brainstorm solutions. Hints are given on a separate sheet included in this topic. As a solution is found, pull the related pollutant pictures out of the river, so that at the end, the river is clean again.

Sum up by asking class what they and their family can do to help the river. If they can give some

relevant answers, the exercise has worked!

Pollution solution hints

Wood cutter: Alternatives to cutting down native trees: using plantation timber; using heating alternatives such as gas/electricity, recycling timber off-cuts. Plant native trees to replace those felled.

Cat owner: Keep indoors all the time or at least from dusk-dawn; build an enclosed cat playground; have a collar with at least 2 bells.

Car driver: Fix oil leaks; avoid leaving rubber on road by not braking suddenly or doing 'donuts'; avoid driving on sensitive areas such as riverbanks; find alternatives to car travel, e.g. walking, cycling etc.

Car washer: Wash car on lawn so water and detergents get used by the garden rather than go down drain; use a car wash (most water is recycled).

Dog owner: Keep dog on lead in bushland/waterway areas; always pick up dog poo and dispose of in a bin.

Horse owner: Don't let horses into waterways to drink; fence off waterways and provide trough or dam instead; collect horse manure to use on garden beds or sell; revegetate damaged riverbanks.

Dairy farmer: Don't let cows into waterways to drink; fence off waterways and provide trough or dam instead; revegetate damaged riverbanks.

Gardener with exotic trees: Plant local native plants instead of exotics (avoids potential weed problems too!); collect fallen leaves and add to

compost heap or garden beds.

Gardener using fertiliser: Only use minimal amount; never use garden chemicals when rain is forecast; recycle kitchen and garden scraps into compost as an alternative to fertilisers; use native plants that are adapted to local conditions and require less chemicals.

Fisherman: Never leave line, tackle or bait behind; buy bait worms or dig them from the garden instead of the riverbanks; never throw back feral fish if caught.

Apple grower: Never use chemicals when rain is forecast and always follow instructions; use drip irrigation instead of sprinklers to lower water use; use organic methods of pest control.

Sheep farmer: Don't let sheep into waterways to drink; fence off waterways and provide trough or dam instead; revegetate damaged riverbanks.

Picnic people: Always put rubbish in bin or take away if no bin is provided; a lot of rubbish can be recycled or reused; never throw fruit away as it can spread germs or weeds.

Grape grower: Never use chemicals when rain is forecast and always follow instructions; use drip irrigation instead of sprinklers to lower water use; use organic methods of pest control; use mulch and plants between rows to prevent soil erosion.

Gardener dumping weeds: Never dump weeds in or near bushland or waterways - dispose of in bins; some weeds can be destroyed by deep burial or composting.

Builder: Cover sand and gravel heaps with plastic sheets to prevent it washing away; put a barrier between the building site and the gutters/drains.