

EAST GIPPSLAND WATERWATCH



# Kindergarten

## Curriculum Resource

# East Gippsland Waterwatch Kinder Catchment Crusader Program

## Introduction

Waterwatch is a national educational and community based program that aims to encourage active participation of community groups, schools and individuals in understanding and protecting our rivers, streams, lakes, wetlands and estuaries.

**The vision East Gippsland Waterwatch maintains is;  
'To bring about an improvement and awareness in water quality and river health in the East Gippsland region'**

This curriculum resource contains information on delivering water conservation education and contains a selection of activities aimed at kindergarten students to assist in their learning, under the Kinder Catchment Crusader Program.

The East Gippsland Waterwatch Program is administered and supported by the EGcMA Water Team.

If you require any further information or assistance please contact:

East Gippsland Catchment Management Authority  
PO Box 1012  
Bairnsdale 3875  
Ph:5152 0600  
[egcma@egcma.com.au](mailto:egcma@egcma.com.au)



## Contents

This resource is divided into three activity sections. Within each section is a summary of the section, teacher information, outcomes, resources and instructions needed for the activity in the section. Activities can be adapted to the individual needs and objectives to suit your school.

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## **Section 1**

### **Rain drop detectives**

#### **Summary**

This section is a two part series. In part 1 students are introduced to the water cycle and how water is formed on our earth and it's importance to all living things. Early years teachers read the Whizzy the water drop pick a path book to students using narrative fiction to engage students in learning about key water messages and water conservation. In part 2 students actively participate in the cotton ball cloud activity.

#### **Teacher Information**

##### ***Whizzy's Incredible Journey's Pick a Path Book***

The new edition of *Whizzy's Incredible Journeys Pick a Path book* is an excellent and versatile classroom resource that enables early years teachers to use narrative fiction to engage students in learning about water conservation and the water cycle. Comprising a series of three separate journeys, the book invites students to accompany Whizzy the water drop on adventures that are both fun and informative. This resource has been specifically designed so teachers can undertake focused learning opportunities with the whole class. The large book size enables teachers to use appropriate illustrations for lessons on key Waterwise and water cycle topics. This book plays a major role in introducing the Waterwise message and key water science concepts to children in the early years.

#### **Outcomes**

Students will understand the process of the water cycle and it's importance to humans and the environment.

#### **Resources required**

##### **Part 1**

Whizz the water drop pick a path book

Before reading the book you may like to introduce this topic by:

- Asking the students on where, how and why water is formed.

After reading the book

- Ask the students to recite the actions of the water cycle and Whizzy.

To down load go to:

<http://www.derm.qld.gov.au/waterwise/whizzy/index.html>

<http://www.derm.qld.gov.au/>

Email: [waterwise@nrw.gld.gov.au](mailto:waterwise@nrw.gld.gov.au) / [www.nrw.qld.gov.au/waterwise/education](http://www.nrw.qld.gov.au/waterwise/education)>

## **Section 1**

### **Resources required**

#### **Part 2**

Plastic buckets filled with water and cotton balls.

## **Part 2**

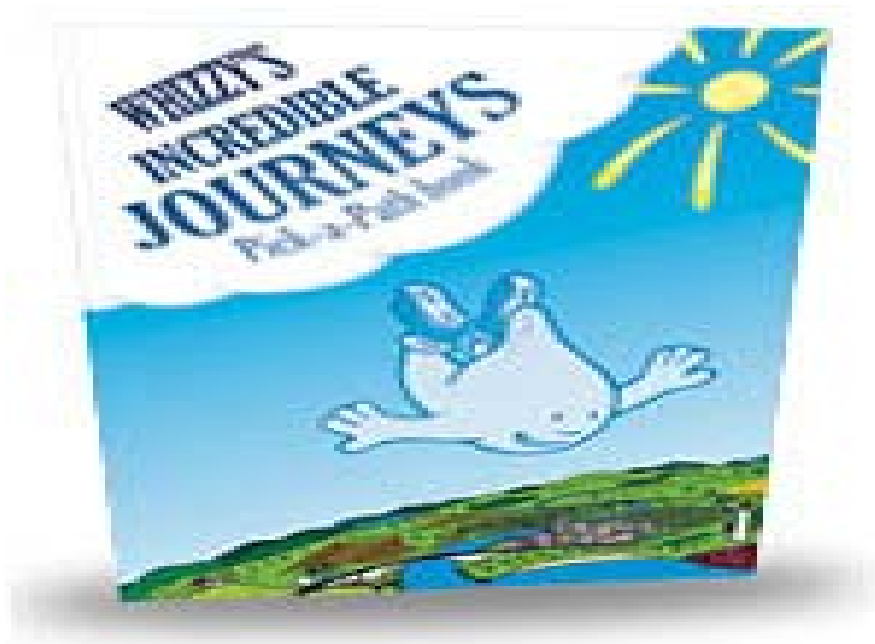
### **Activity**

## **Cotton ball clouds**

#### **Procedure**

Explain to the students that they can now do an experiment with a bucket of water and some cotton balls. They will be able to feel and see what a cloud would be like when full and be able to make it rain.

Give each student some cotton balls- they are light like a cloud. Now put the cloud in the bucket of water and let the cotton ball fill with water - the cloud is becoming heavier - as it gets fuller and heavier it drips - its the same as raining.



## **Section 2**

# **Kinder Catchment Story**

### **Summary**

This section is a two part series based on the impacts that catchment land use and humans have on water quality.

### **Teacher Information**

Part 1. It is recommended that teachers read one or more of the resource books designed to be incorporated into the program. These books will prepare students for part 2 the activity Kinder Catchment Story - "A dolphin tale" showing what polluted water looks like.

### **Outcomes**

Students will have a better understanding of the concepts of pollution and water quality.

### **Resources required**

#### ***Part 1***

#### ***I Need Clean Water***

Water is one of the most basic necessities of life. Not only must we have a constant supply of water, it must also be clean and free of pollution. Polluted drinking water is one of the major causes of infant mortality in developing countries.

Before reading the book you may like to introduce this topic by:

- Making a list of things students use water for.
- Make a list of animals and plants that also need water.
- Discuss adventures or experiences involving water.

After reading the book:

- Discuss the consequences of not having clean water.
- How do you know if water is clean or dirty?.
- Where is clean water found?.
- How can you keep water clean?.

#### ***All Blocked Up***

When litter and polluting materials are washed into drains we cant' always see the consequences. One of the results can be blocked drains. When it next rains, the water may not be able to escape down the drain. It can only escape above ground, flowing downhill. Rubbish is some thing we no longer need and want to dispose of. Litter is rubbish that has been inappropriately disposed of in the general environment and can therefore cause environmental problems.

Before reading the book you may like to introduce this topic by:

- Asking if there is a difference between rubbish and litter.
- Discussing what litter may consist of.
- Talking about what happens when litter is dropped.
- Ask where litter may end up.

## **Section 2**

After reading the book

- Go into the school and look for litter.
- Using tongs and gloves pick up the litter.

### ***Living Rivers***

The pollution in our local rivers, creeks or beaches mostly comes from our streets and around our homes. Rain washes many different materials down into the storm water drains from our homes and streets. The storm water drains empty the water into rivers, creeks and the sea carrying any materials that have been picked up. This is why our beaches tend to have the highest pollution levels after rain.

Before reading the book you may like to introduce this topic by:

- Making a list of things that live in creeks, rivers and the ocean.
- Why do the animals and plants need the water?.
- Discussing where the students might find a creek, river and ocean in their local area.

After reading the book

- What can be found in the creeks, rivers and ocean to make them polluted?.
- What animals were in the book- is it only those animals that need the water?.
- How can we keep the creeks, rivers and oceans clean?.

To purchase contact:

### **I Need Clean Water, All Blocked Up, Living Rivers - Living Water Literacy Kit**

Published by Gould league of Victoria Inc

Genoa Street,

Moorabbin, Victoria 3189

Phone (03) 9532 0909

Email [gould@gould.edu.au](mailto:gould@gould.edu.au) / [www.gould.edu.au](http://www.gould.edu.au)

### **Resources required**

#### ***Part 2***

#### **Kinder Catchment Story - "A dolphin tale".**

Print off "A dolphin tale" story provided in this section.

Art supplies including wooden icy pole sticks

Multiple cut outs of the animal pictures and have them decorated by the students.

Large clear plastic tub filled with clean water.

Multiple small Canisters with lids, labeled with a character name - also provided at the end of the story."A dolphin tale".

## **Section 2**

### **Canisters**

- **Wombats** - Dirt
- **Koalas** -Wooden Blocks, Plastic Building Blocks
- **Kangaroos** - Grass, Twigs, leaves and blue food colored water (to represent chemicals)
- **Kookaburras** - Lolly wrappers etc
- **Possums** - Sponge soaked in dishwashing liquid .
- **Tassie Devils** - Rubber and red food colored water( to represent fuel)
- **Wedge Tail Eagles** - Fishing line and sinkers
- **Swans** - Plastic dog poo -(this can be purchased at toy shops)
- **Echidnas** - Cooking oil colored with black food coloring
- **Platypus** - Plastic drink bottles

\* Please note that the characters in the story can be changed to suit the individual needs of the school and it's up to the school to provide the relevant cut outs of the characters.

## **Part 2**

### **Activity**

## **Catchment story " A dolphin tale"**

### **Procedure**

Fill the labeled canisters with the relevant ingredients required for each animal.

Fill the large plastic tub representing a river, with clean water and sit on the floor of a large area.

Have the students ready with their animal characters to sit around the tub in a circle.

Provide to each student the relevant canister.

Explain how the story works and that as it progresses each student in turn will tip their ingredients into the tub of water.

Progress with the teacher reading the story.

At the end of the story the water will be polluted.

After reading the story

- Ask the students what they think of the water
- Would they like to be the dolphin living in that water and how would all the other animals feel about it?
- Ask students what actions they could take to help.
- Examples of -if oil was leaking from your boat, dog poo lying on the ground at the park, no rubbish bin provided or fishing line and tackle left behind.





## Section 2

### A dolphin tale

This is how the story begins

We have a tank of clean water.

Let's pretend that this tank of nice clean water is a river, this river flows down to a beach, from this beach it flows out to the big blue ocean. I would like you to meet my friend- the dolphin. Our friend the dolphin loves to swim and play all day with his friends in his very healthy river. Along this river a new house is being built, and this is where our story begins. The **WOMBATS** are building a new house, there is lots of dirt dug up, when it rains all this dirt will wash into the river, this makes the water all muddy, so our friend the dolphin has a hard time breathing.

All the **KOALA'S** are trying to be helpful, and being good friends to the wombats are helping build the house, but the **KOALA'S** are very, very messy and lots of metal, bricks and wood is lying around, they haven't put it into the bin. It will roll into the river eventually.

Down the road the **KANGAROO'S** have been so busy doing lots and lots of gardening, they have been mowing the grass, clipping the hedges, and spraying the plants with chemicals to keep the grubs away. The grass and chemicals are going into the gutter. They should have put it in the bin. If too much grass and chemicals get into the river it can take out all the air out of the water and choke the plants and animals like our friend the dolphin who needs the air in the water to breathe.

Skate boarding down the footpath next to the river on their way to the park are the **KOOKABURRA'S**, they are all eating ice creams or lolly pops, a gust of wind blows the wrappers from their wings, the wrappers float lazily to the water onto the river; they start to float down towards the beach.

Because the sun is shining, the **POSSUM'S** have decided to give their car a wash. They make heaps and heaps of bubbles by using lots of detergent, all this is running down into the gutter, this then travels into the river. Dolphins don't like soap and detergent; these can make horrible things grow in the water that can be bad for them. They should have washed the car on the lawn, the grass doesn't mind all the soap and bubbles or they could have taken the car to the car wash just down the road.

The **TASSIE DEVIL'S** are driving down to the park. Rubber from their tyres has come off and petrol from their tanks is spilling onto the road, this will wash into the river when it rains e bottom of the river or slowly make its way to the beach and the ocean. This makes it harder for dolphin to swim.

Down at the park the **WEDGE TAIL EAGLES** are trying really hard to catch a fish. The **WEDGE TAIL EAGLES** are not very good at all at fishing and are very lazy.

## **Section 2**

They have a huge tangle of fishing line and are really clumsy, instead of putting it in the bin or taking it back home with them, they just leave it lying around on the jetty. Can anyone guess where it might end up? Whoops! Animals can get tangled in the fishing line including themselves, and it can be very harmful. Poor dolphin

Now the river is getting near the beach and getting closer to the ocean.

The **SWANS** are taking a walk on the beach, someone has had their dog on the beach as well, dog poo (Yuk) is every where, and they did not pick it up. The waves are taking the poo into the water. Poo can have harmful bugs in it that can make animals and people very sick. Our dolphin is really starting to be sick.

Opposite the **ECHIDNA** is zooming around in his ski boat. **ECHIDNA** has not looked after his boat, oil is leaking from the engine directly into the water. This makes sludgy goo on the top of the water after a while; **ECHIDNA** really should get it fixed.

Meanwhile the **PLATYPUS** have just finished having a drink. There is no rubbish bin around so their drink bottles get tossed into the water; it heads straight for the ocean. It's not a pretty sight and animals might mistake it for food and try and eat it!! We know that you can't eat plastic bottles -Right?? Now the river is at the ocean, look at what they have done to the river and the ocean. Look at what they have done to our poor friend the dolphin!!

**Our dolphin** is really, really sick

I don't think the Dolphin would like it here anymore; I think that our dolphin will go away to somewhere else where the water is clean and healthy" Our dolphin swims off in search of cleaner water.

Yuck! Can you imagine swimming in all that gross stuff that's on our streets?

Soaps, grass clippings, rubbish, pet poo, dirt and oil are just some of them.

So water pollution or the water getting dirty can come from a lot of different places.

### **Canisters**

- **Wombats** - Dirt
- **Koalas** -Wooden Blocks, Plastic Building Blocks
- **Kangaroos** - Grass, Twigs, leaves and blue food colored water (to represent chemicals)
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## **Section 3**

### **Water Bug Blitz**

#### **Summary**

This section has two activities. In the first activity Water bug Blitz, students are able to look at live water bugs and animals living in rivers, ponds and the ocean and are encouraged to touch other exhibits provided. In the second activity the Musical Macro game students can identify aquatic animals in a fun and interactive way.

#### **Teacher Information**

Prior to the activity water bug blitz teachers will need to gather a collection of bugs and aquatic animals.

#### **Outcomes**

Students will be able to experience and discover water bugs and aquatic animals in a controlled natural environment.

#### **Resources required**

##### **Part 1**

##### **Water Bug Blitz**

Collection of live water bugs and animals. \* See note

White plastic trays or ice cream containers.

Plastic spoons.

Hand magnifiers- optional.

Other animals that once have lived in the water- collection of shells, sea stars, coral (Griffiths Sea Shell Museum in Lakes Entrance have a great range of these things)

##### **\* Note**

You will require a very fine net to collect the live animals.

Dams, ponds, wetlands and rivers are great places to go to.

Some animals are not permitted to be taken from their natural environment

(Example tadpoles/frogs and fish)

Keep the live animals in sufficient water, out of direct sunlight and cool.

Preferably in a container with a lid. Do not refrigerate.

Please be very careful and return the animals in original condition to their natural environment as soon as possible.

Ask local authorities if in doubt.

#### **Resources required**

##### **Part 2**

##### **Musical Macro Game**

Laminated bug or animal pictures (A4) for the macro game( this is up to the individual school to provide and can be changed to suit animals that live in the water)

A musical CD/tape

## **Section 3**

### **Part 1**

#### **Activity**

### **Water bug blitz**

#### **Procedure**

Collect live animals - keep as cool as possible.

Arrange the live animals in their trays or containers. Place with spoons and hand magnifiers for students to take a closer look at. Arrange other specimens around the room and encourage students to touch, feel, smell and discuss the subject. Return all live animals back to their original environment in original condition as soon as possible provided.

### **Part 2**

#### **Activity**

### **Musical Macro Game**

#### **Procedure**

This game is based on the game musical chairs but uses pictures of water bugs or animals. Place pictures on chairs or in a circle on the ground. Each student stands at a picture and when the music starts walks around the circle of pictures. When the music stops they will choose a picture to stand at. The teacher in turn will hold up a picture- if the student is standing at that picture the student is then out of the game. The game continues on until there is only one winner.



## **Section 4**

### **Learning outcomes**

**Physical, Personal & Social Learning** - Interpersonal Development and Civics & Citizenship

**Discipline-based Learning** - The Arts, English, and Geography

**Interdisciplinary Learning** - Communications, Design, Creativity & Technology and Thinking



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