



PO BOX 359 CAIRNS Q 4870
WEBSITE: www.cairns.qld.gov.au
EMAIL: council@cairns.qld.gov.au
ABN 24 310 025 910

Water Education Curriculum

Meet with the teacher and introduce myself to the students and talk about Cairns Regional Water and Waste and the services it provides.

Talk about water and water services.
Talk about waste and waste services.
Talk about wastewater and services.

The above will relate to student levels and I will provide examples of day to day use in their homes and schools. The main message = **Water Demand Management**. Why it is important to save and conserve water in this region.

Discuss water e.g. the Water Cycle with visual posters.

Discuss Catchment and wetland areas within our region, north and south.

- Where is the catchment?
- What is a wetland?
- Where is the water held?
- Who uses the water in our catchment area?
- Why is water so vital to our natural environment?
- Who benefits from the catchment area?
- Is our catchment healthy?
- How can we provide better management to the catchment?
- Where else do we get water? North and South?

Class Activities

1. **Sketch, draw or write** about the local catchment and surrounding wetland areas. Include who will benefit from the catchment e.g. community, farmers, the reef and wildlife.
2. **Create a class mural** on the water cycle, the dam, the rainforest, the local community, water usage and water whereabouts e.g. wastewater.
3. **The Sponge** - Place a sponge under running water to demonstrate the reduction of flow. Use this principle relating to the catchment and promote discussion on why it is important to conserve the natural environment and natural environmental flows. Talk about humans as sponges and refer to Water Demand Management. Review "It's not all for us to soak up" campaign and discuss ways the community can reduce water usage.
4. **Making a model catchment** - using an aquarium or small wadding pool, create your own catchment.

Catchment feature:

Dam	-	Cling wrap
Pipes	-	Straws
Forests	-	Rivers and oceans
Reservoir	-	Containers
Houses	-	Building blocks
Wastewater	-	Containers

This display will focus on water and the way it is recycled over and over again on the planet. As water travels through the cycle, it goes through a number of processes, from gas to clouds and finally to rain, hail or snow. The model catchment will visualise catching water and how the water is delivered to the wider community and back to the ocean.

CAIRNS

119-145 Spence Street, Cairns Q 4870
Ph: (07) 4044 3044 Fx: (07) 4044 3022

MOSSMAN

64-66 Front Street, Mossman Q 4873
Ph: (07) 4099 9444 Fx: (07) 4098 2902

A catchment displays

- A catchment is an area of land where run-off from rainfall goes into a river system;
- Water from the catchment is pumped to "Tunnel Hill" - the water treatment facility. Here the water is treated for drinking;
- The water is pumped to reservoirs around the catchment area and gravity fed to the surrounding homes in the community;
- The pressure flow of water is determined by the position of the reservoir, how much water is in the reservoir and how many people are using the reservoir;
- Wastewater is pumped to a treatment plant and then pumped to the ocean.

Discussion:

- Where did you put the dam?
- When it rains (use a spray bottle of water) where does the water flow to? Why?
- Spray water onto sandy slopes. What happens?
- Now place some grass clippings on the sandy slope. What happens?
- Why is it important to grow trees along side dams and rivers?
- What happens to wastewater?
- Do you know about the Cleaner Seas Initiative?
- Why is it important to recycle water in our region?
- How can we use recycled water?
- How does water from your ocean get into your dam?

Use student knowledge of the local area:

- Compare and contrast catchment images with posters and photos with the area in which the students live.

Discussion

- What is our catchment like?
- What are the wetlands representing?
- What quality do you think it is in?
- What areas and places use water in the catchment?
- What flora and fauna are reliant on water within the catchment?
- Is there anything special about this local catchment?
- How do habitats survive?
- What types of trees, shrubs and animals do you find in the catchment?
- What land usages are present?
- Why is it important to keep a natural balance?
- What are the challenges for our future?
- Why is Water Demand Management important?

Class Activity

In small groups the students will present via drawings and point form:

1. Prepare a short description of the natural catchment area;
2. Discuss the difference between a healthy and unhealthy catchment is?
3. Assess the condition of the land in the catchment area;
4. Talk about Water Demand Management;
5. Talk about the Cleaner Seas Initiative;
6. Create slogans to promote involvement of catchment management.

CAIRNS

119-145 Spence Street, Cairns Q 4870
Ph: (07) 4044 3044 Fx: (07) 4044 3022

MOSSMAN

64-66 Front Street, Mossman Q 4873
Ph: (07) 4099 9444 Fx: (07) 4098 2902

Class Updates:

- Set goals and objectives – why is our local catchment so important?
- Discuss ways in which your school can help / contribute to water conservation;
- Form a catchment or wetland group to promote policies /programs, cleaning practices and reflect on sustainable living in a catchment;
- Develop Reduce, Reuse, Recycle projects for school and home environments;
- Present Environmental education displays in schools;
- Form water watch groups;
- Develop action plans for identified sites on Water Demand Management;
- Brain storm for new ideas.

Water and You

- How much water do you and your family use?
- Create a water usage chart for the students.

<u>Room</u>	<u>Average Amount Used</u>	<u>Me</u>	<u>Family</u>	<u>Total</u>
Shower	13 litres per min			
Bath	120 litres			
Toilet				
Half flush	4.5 litres			
Full flush	9 litres			
Hand washing dishes	9 litres			
Dishwasher	45 litres			
Washing machine	125 litres			
Cleaning teeth	3 litres			
Garden sprinkler	100 litres per hour			

Discuss:

- How many litres of water do you and your family use on a daily basis?
- How could you and your family reduce water consumption?
- How can the general community reduce water consumption?
- Why is it important to conserve the water in your community?
- What happens when the water levels reduce?

CAIRNS

119-145 Spence Street, Cairns Q 4870
Ph: (07) 4044 3044 Fx: (07) 4044 3022

MOSSMAN

64-66 Front Street, Mossman Q 4873
Ph: (07) 4099 9444 Fx: (07) 4098 2902