

## Water in my catchment

Adapted from *Watersense Teacher Resource File* (2007) reproduced courtesy of Brisbane City Council.

This lesson could be omitted if your class completed the Years 6 and 7 'Water journeys' unit in this resource.

### » Lesson overview

In the previous lesson, students explored some of the water issues faced in developing countries. In this lesson, students focus on the catchment that supplies their water. The impacts of various local land uses on drinking water supplies are identified.

### » Lesson objectives

In this lesson, students:

- create a class map of their catchment and record features and land uses
- explore how their local waterway has changed over time and who is responsible for managing it.

### » Opportunities for assessment

Monitoring of student journals will allow identification of student alternative conceptions and provide evidence of student learning.

### » Equipment

#### For the class

- a range of information and resources about the local catchment, and catchments generally
- a local street map (or use Google Maps or Google Earth)
- 3 m x 3 m piece of calico fabric with catchment map or image grid drawn on the material.

### For each student

- water-based paints
- paintbrushes and water
- student journal

### » Preparation

- For information about the local catchment, contact the local council, the natural resource management regional body, the local Landcare group or catchment group.
- Check that the Google map of your area has a resolution good enough to enable students to pick out details about land use.
- Pre-draw a map of the waterway onto the calico and draw grid lines over the map. The number of grid squares should be the same as the number of student teams in step 2 below.

### » Lesson steps

1. Review student ideas from Lesson 2 about where drinking water comes from in your locality. Identify the location of the local water treatment plant. If you have access, and the imagery is available, students can explore the hybrid maps in Google Maps <<http://maps.google.com/>>. A street directory or Google Earth <<http://earth.google.com/>> can also be used to explore the land use of the catchment area upstream from your water treatment plant. Note that Google Earth downloads use far more internet bandwidth than Google Maps downloads.
2. Students will create a class catchment map on the calico. Divide students into teams of three or four and allocate an area of the grid for each team to study. Each team is responsible for locating the relevant information using Google Earth, Google Maps or a street directory.

Make sure students draw the following:

- the start and end points of the waterway (if you can; desert channels are a challenge)
  - dams or water treatment plants that fall in their grid
  - stormwater outflows
  - students' closest access point to the waterway from the school
  - urban areas, local sites and landmarks
  - natural features such as waterholes, billabongs and mountains
  - some favourite places students have visited.
3. Decide on a title for the mural, such as 'My local catchment mural'. Display the mural in the classroom.
  4. Referring to the map they have drawn, explain to students that their local area, and the creek running through it, is called a catchment. Everyone lives in a catchment.
  5. Prompt students to think about the fact that their local waterway passes through many areas or suburbs. Some discussion points could be:
    - Is the waterway better than it was one hundred years ago? How can you justify your answer?
    - Who owns the creek or river?
    - Who is responsible for it?
    - Who cares for the creek?
  6. Highlight the fact that we are all responsible for the health of our waterways. Ask the students to think of specific examples of ways that they can improve the health of their water.
  7. Students write in their journals a reflection on what they have learned during this lesson. They should date their entry and can use written text, drawings or labelled diagrams to enhance it.

8. In further activities you could locate a variety of industries around the catchment (rural, port, residential, commercial, extractive, retail, manufacturing, sports, green space, etc.).

### » Optional activities

1. Ask students to liken a river to a resort, as in the activity at <[www.qld.waterwatch.org.au/resources](http://www.qld.waterwatch.org.au/resources)>. They can think of everything a resort needs and express their thinking in a drawing. Suggest several types of drawings students could make to present the important features of a river resort. Make a brochure to advertise your resort.
2. Invite a catchment officer or catchment group representative to school. Students write questions for their guest speaker. In South East Queensland, a representative from the Healthy Waterways group could be invited to speak.
3. Students could investigate land use clearing and erosion by constructing a model of a catchment in the sandpit at school. Use various types of soil and experiment with covering and not covering soil with land cover. Refer to Unit 1 in the Years 6 and 7 resources.
4. Students could write their own, locally specific, versions of Nadia Wheatley's book *My Place*.

### » Curriculum links

#### Mathematics

Use Google Earth and street maps.

#### SOSE

Produce a waterway map.

#### English, Science

Write a reflection with supporting diagrams.