

AS6 – State of the Catchment Field Trip

This activity is a field work exercise in which you will study the habitat and water quality in a waterway near your school. It involves some classroom research and two field trips.

Syllabus references:

Outcomes

Core Content: 5.10 a) distinguish between biotic and abiotic features of the local environment

5.10 c) describe some impacts of human activities on ecosystems

5.10 d) discuss strategies used to balance human activities and needs in ecosystems with conserving, protecting and maintaining the quality of the environment

Skills: 5.13.2 Plan first hand experiences to

c) describe a logical procedure for undertaking a simple or controlled experiment

d) establish an appropriate timeline for an investigation

Time: 120 minutes

You will need

AS7 - Habitat Assessment Sheet

a Streamwatch kit, a schools data logger or Oz GREEN Low Cost kit

Activity

This study can be performed at a local waterway or at one of the field trip sites described in this kit.

Prework

Research water tests used to examine water quality and their significance in water testing. Examine Dissolved Oxygen, Biochemical Oxygen Demand, Phosphates and Faecal Coliform tests and use the Streamwatch manual or internet www.ea.gov.au (search for water quality guidelines) to research guidelines for recommended permissible levels for each parameter.

Visit the chosen testing site.

Use the AS7 - Habitat Assessment Sheet to perform a habitat assessment of the site.

Use a Streamwatch kit, a schools data logger or Oz GREEN Low Cost kit to test the water quality at your testing site.

Record the results from each test.

Back in class

Identify any water quality problems, analyse possible explanations and possible solutions to these problems

Class Discussion

Discuss factors affecting water quality, including human activity, recent rainfall, temperature, drought etc. Relate these to the water test results collected in the field.

Streamwatch groups enter data on Streamwatch website www.streamwatch.org.au

Use the Streamwatch database (www.streamwatch.org.au) and water quality reports from Upper Parramatta River Catchment Trust website (www.upperparra.nsw.gov.au) to access

water quality data gathered from other sites in your subcatchment or the Upper Parramatta River Catchment.

Determine the extent to which other areas have similar water quality issues.

What are the main water quality issues in the catchment?

Perform a second field trip and test the same water quality parameters as in the first field trip.

Compare and contrast these results with those obtained in the first field trip.

Account for any differences.

Draw graphs to show any changes over time using these and any other results you can obtain for the site.

