

➤ STREAMWATCH

Target Group: **Year 7**

Australian Curriculum Reference: **Science (Biological Science)**

- + There are differences within and between groups of organisms; classification helps organise this diversity (ACSSU111).
- + Interactions between organisms can be described in terms of food chains and food webs; human activity can affect these interactions (ACSSU112).
- + Water is an important resource that cycles through the environment (ACSSU222).

LESSON SUMMARY

Introduction to unit of work on Streamwatch and the concept of citizen science.

This unit will involve the collection and analysis of water quality parameters from a local waterway, and communicating this information to relevant government agencies such as the local council.

This unit can run for as long as individual teachers want, depending on time constraints.

LESSON CONTENT AND METHODOLOGY

- + Introduce lesson with a brainstorming session on water quality. Questions to consider include the following.
 - + What is water quality?
 - + What aspects of quality are important?
 - + What are the effects/implications of water quality?
 - + How could water quality be monitored?
 - + Who monitors water quality?
 - + Who is responsible for water quality?
- + Engage students in a discussion about Streamwatch, covering what it is and who does it. Introduce the concept of citizen science, and the fact that working as a team to monitor and report on water quality of a local waterway is a form of volunteering and contributing to the local community.

- + Conduct some simple water quality tests such as pH and turbidity and begin to tabulate the data. Students will collect samples at regular intervals and add to the data until they have sufficient data to provide their findings to the local council.
- + Concurrent lessons will add to student knowledge about topics including, but not limited to:
 - + classification of aquatic organisms
 - + food webs
 - + impacts of human activities
 - + practical work involving collection of data
 - + analysis of data and communicating of findings.

ASSESSMENT

Assessment of the topic will be in two parts:

- + the report on the long term health of a particular site on a local waterway which will be presented to council, and
- + an individual research project by students, identifying one other citizen science project they can contribute to and the data they have collected on that over a term.

RESOURCES

- + School science faculties will have much of the equipment required to conduct simple water quality assessments
- + Information, kits and other resources are available through www.streamwatch.org

Citizen science web links

- + ABC Radio National:
www.abc.net.au/radionational/programs/scienceshow/citizen-scientists-produce-real-results/5458340
- + Explore the sea floor: exploretheseafloor.net.au
- + National Parks Association of NSW: www.npansw.org.au/index.php/campaigns/citizen-science