

4 LESSONS

TERM THREE

MACROINVERTEBRATE SAMPLING

- Learning Objectives
- Background
- Activities
- Curriculum Mapping





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LEARNING OBJECTIVES

Here you will find the learning objectives for this lesson

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WETLAND ACTIVITIES

There is one activity for this lesson

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CURRICULUM

See how this lesson maps with the Australian curriculum

Learning Objectives

At the end of the lesson, students will be able to:

- (1) Conduct water bug survey at their local wetland;
- (2) Identify macroinvertebrates from their local wetland.

Wetland Activity

ACTIVITY - Macroinvertebrate Sampling

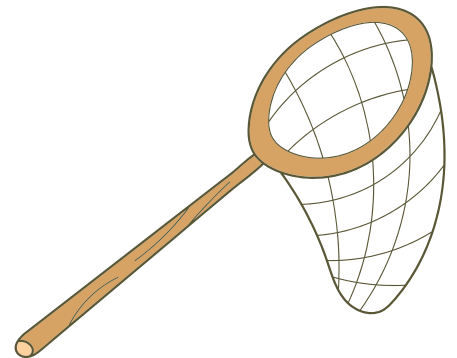
(1) Divide the class into groups and conduct macroinvertebrate sampling from the same sites selected for water quality testing.

Equipment:

- Dip nets
- Buckets
- Large trays for sorting
- Ice cube trays for smaller sorting
- Spoons, pipettes
- Eppendorf tube (or similar) for collection of subset of water bugs for classroom activities.
- The Waterbug App for identification (downloaded from Google Play or iTunes).

More information can be found on the National Waterbug Blitz website.

<https://www.waterbugblitz.org.au/Get-Involved>
(Copy and paste into browser).



Wetland Activity

ACTIVITY - Macroinvertebrate Sampling (Continued)

Water bug Collection:

- Pour clean wetland water into a bucket near the water's edge.
- Student's stand at the water's edge and using circular sweeping motion, sweep the dip net through the water multiple times.
- Students should be sure to sample all habitat types.
- Rinse the sample until water runs clear and transfer collected water bugs to a bucket.
- Rinse any mud or silt from the dip net before re-sampling.
- Transfer water bugs into buckets into large sorting trays for students to sort through. Keep waterbugs in the shade.

Sorting Water bugs:

- Students observe water bugs swimming in the large tray.
- Students fill the ice cube trays with clean water.
- Students transfer the water bugs into the ice cube trays using spoons, sorting the water bugs as they go.



Wetland Activity

ACTIVITY - Macroinvertebrate Sampling (Continued)

Recording and Identification:

- Students identify the types of water bugs collected using the Waterbug App.



- Document the abundance of each water bug using the ALT Waterbug Field Sheet (downloaded from the Waterbug Shop).

Link to field sheet:

<https://www.embraceecology.com.au/waterbugshop/alt-waterbug-field-sheet> (Copy and paste into browser).

Pack up:

- Students return water bugs to the location they were sampled from.
- Teachers may keep a small subsample of macroinvertebrates for use in Lesson 5, Term 3.
- Wash large sorting trays, ice cube trays and dip nets.

Australian Curriculum addressed in this Lesson



Science

Strand: Science inquiry (Year 5)

Sub-strand: Planning and conducting

AC9S5I03: use equipment to observe, measure and record data with reasonable precision, using digital tools as appropriate.

AC9S5I02: plan and conduct repeatable investigations to answer questions, including, as appropriate, deciding the variables to be changed, measured and controlled in fair tests; describing potential risks; planning for the safe use of equipment and materials; and identifying required permissions to conduct investigations on Country/Place.

Strand: Science inquiry (Year 6)

Sub-strand: Planning and conducting

AC9S6I03: use equipment to observe, measure and record data with reasonable precision, using digital tools as appropriate.

AC9S6I02: plan and conduct repeatable investigations to answer questions, including, as appropriate, deciding the variables to be changed, measured and controlled in fair tests; describing potential risks; planning for the safe use of equipment and materials; and identifying required permissions to conduct investigations on Country/Place.