



# Connected Classrooms Lesson

School	School
Phone	
Contact Teacher	
Teacher Mobile	
Date	
Time	
Class	
Student Numbers	
Anticipated Cost	x \$5 = \$180
Theme	Interactive Invertebrates

- Thank you for registering for a Connected Classrooms Lesson. Please read through this document so you are familiar with the program, resources and materials needed on the day.
- This program costs **\$5.00** per student. No GST is payable. **Your school will be invoiced based on student numbers at the time of booking.** Please contact the centre immediately if there is any major variation to these numbers.. Combine this VC with Invertebrate Ink during the afternoon time slots for a discounted cost of \$8 per student.
- **Cancellations** with less than two week's notice will incur a \$50 administrative fee.
- During this session students will be conducting an invertebrate investigation in the grounds of their school. **Details of the equipment your school needs to provide** are on the third page.
- Please **use the exact details below** when you dial in and log on.
- We highly recommend you **begin connecting at least 20min before** the session is due to start. If you have never used the equipment before it would be beneficial to practise before hand. Details of how to set up your Video Conference are on the following page.
- If you experience **technical issues** the presenter may not be able to assist you. Please follow these steps:
  1. Notify the presenter of the trouble.
  2. Call 1800 824 737 from a normal phone or
  3. Pick up the IP phone in the Connected Classroom box and speak to IT support.
- Once connected, **please turn your microphone to MUTE** until it is your turn to speak. If microphones are not muted, they may be remotely muted by IT Support and unfortunately you will not be able to answer questions.

## How to set up your Video Conference:

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- Dial the virtual meeting room number on your Tandberg VC remote. This will connect you to the Video Conference.
- Please PRESS MUTE ON YOUR REMOTE when you are not contributing to the VC.
- Using the connected classrooms computer, logon to your DEC portal. Click on the 'My Applications' tab.
- Find Bridgit and click to download. Follow the on-screen instructions to download and run.
- Once Bridgit is running, look for the meeting name for your session and select 'Join'. Enter the relevant password.
- Always have 2-3 students waiting at the IWB as part of the VC.
- It helps to have a school banner with your school's name on it visible in field of view.

## Things to think about before the VC starts:

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- This is an interactive video conference. Are you and your students familiar with [VC etiquette](#)?
- There may be other schools dialing in. Consider asking them a question or planning another collaborative VC together.
- Interactive video conferences are a core part of teaching and learning. How can you make this experience part of the student's assessment? You are welcome to contact Field of Mars EEC to discuss ways of integrating VCs into learning.

## Syllabus Foundation Statements (Stage 2) - Refer to syllabus documents for stage statements and outcomes

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### Science and Technology

Students conduct guided investigations by following a series of steps that include questioning, making and testing predictions, collecting and recording data, observing patterns and suggesting possible explanations.

Students select and safely use a range of equipment, computer-based technology and other resources to investigate and explore.

Students describe ways in which living things depend on the Earth and its environment.

### Human Society and its Environment

Students acquire information about their local community by direct and indirect experience and communicate with others using various forms of electronic media.

Students make comparisons between natural, heritage and built features of the local area and examine the human interaction with these features.

### English

Students communicate with a wide range of people on familiar and introduced topics to achieve a variety of purposes.

### Environmental Education Objectives

Students will develop:

*knowledge and understandings about:*

- the nature and function of ecosystems and how they are interrelated (K1)
- the impact of people on environments (K2)
- the principles of ecologically sustainable development (K4)
- career opportunities associated with the environment (K5)

*skills in:*

- applying technical expertise within an environmental context (S1)
- identifying and assessing environmental problems (S2)
- communicating environmental problems to others (S3)
- resolving environmental problems (S4)
- adopting behaviours and practices that protect the environment (S5)
- evaluating the success of their actions (S6)

*values and attitudes relating to:*

- a respect for life on Earth (V1)
- a commitment to act for the environment by supporting long term solutions to environmental problems (V3).

# Interactive Invertebrates

## Overview

*What do we want the students to learn?*

This activity should provide the students with an understanding that:

- Invertebrates are incredibly diverse and are found in variety of different habitats.

## Background

*Why does it matter?*

In natural systems invertebrates are very important animals. For instance, invertebrates help to recycle dead plant and animal matter, help to pollinate flowers and distribute seeds, and help aerate and turn the soil. Some eat other invertebrates which balances population numbers. Invertebrates are also an important food source for vertebrates higher in the food chain. Loss of habitat and inappropriate use of pesticides have an impact on invertebrate populations.

Scientists use invertebrates as a bio-indicator, that is, an indicator of the biodiversity of an area. This is because invertebrates are easy to sample, have great variety and abundance, play an important role in ecosystems and are sensitive to environmental changes. When assessing the biodiversity of an area, scientists make comparisons in invertebrate samples collected from various sites at the same time and also within the same area taken at different times.

## Sample Outcomes: (Stage 1)

*ES S1.6 Identifies and describes ways in which people and other living things depend upon the Earth and its environment.*

A student:

- reports on the variety of invertebrate animals in a natural environment

*INV S1.7 Conducts guided investigations by observing, questioning, predicting, collecting and recording data, and suggesting possible explanations.*

A student:

- identifies and describes examples of evidence of invertebrates
- uses invertebrate trapping and collecting equipment to collect invertebrates

## Learning Activities

Students will investigate the amazing diversity of invertebrates that inhabit their school. In this indoor and outdoor video conference students will learn about the importance of invertebrates, their features and habitats and how to safely collect them.

Students will conduct an invertebrate investigation in the grounds of their school.

## Invertebrate Investigation Instructions:

The methods of collecting invertebrates, safety aspects and possible dangers will be described during the video conference. The students will be instructed not to pick up any animals with their hands. Collection methods used for this activity include tree shakes and/or leaf litter searches.

To collect invertebrates from branches, a tree shake is used.

1. Students hold a sheet under a branch while an adult vigorously shakes or beats the branch.
2. Invertebrates should be dislodged and fall onto the sheet for collection.
3. Collect into specimen jars using a small brush.

To collect and observe leaf litter invertebrates (optional):

1. Using a trowel, scrape up a trowel-full of leaf litter.
2. Scatter it into a tote tray to look for animals such as pill millepedes, slaters, cockroaches, ants and spiders.
3. Collect into specimen jars using a small brush.

Collected invertebrates will be graphed and identified during the second part of the session.

All animals will then be returned to the place they were found and the leaf litter restored.

## School Provides:

- Old sheets, tarps or large pieces of light-coloured plastic
- Paint brushes
- Collection containers (eg, plastic specimen jars)
- Tote trays (optional)
- Trowels (optional)

