

Unit 3: Environmental Chemistry *End of Unit Project*

You must choose **1** of these

You may do the chosen project **alone**, with a **partner**, or in a **group of 3**
(Depending on what is allowed for each project)

Description of Project Goals

1. To present a **Citizen's WHMIS Home Inspection Manual** that identifies the common hazards that are dealt with everyday by ordinary people.
2. To design and construct an **Invertebrate Identification Game** that will help students Identify biological indicators common to Alberta Freshwater systems.
3. To prepare a **30 sec. video commercial** that identifies an **Alberta Environmental Problem / Situation** and identifies activities, that, Junior High School Students can get involved in to help solve it.

Background:

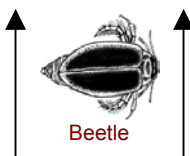
Citizen's WHMIS Manual (Alone, w/partner, Group of 3)

Workers everyday face workplace hazards and **Alberta Occupational Health and Safety** have developed strict guidelines to follow in order for the workers to be safe when working with hazardous products or hazardous situations.

What about ordinary citizens (your parents and yourselves)? What hazardous products and hazardous situations should citizens be aware of in their homes and what should they do to be safe?

Invertebrate ID Game (Alone or, w/partner)

Biological Indicators are organisms that live in particular ecosystems. Their presence and size of population can help to indicate the quality of the ecosystem.



Beetle

Enviro-Commercial (Alone)

To be proud of the province you live in you also need to be a part of some of the solutions to the environmental problems in this oil rich province. There are many challenges in the oil and gas industries, pulp and paper, agricultural and cattle industries that need to be addressed. Can one person make a difference? Yes – you can, and you will show others how they can as well, with your **30 sec. Enviro-Commercial..**

This site provides all the factual data you will need for your game.

http://www.riverwatch.ab.ca/how_to_monitor/invert_identifying-ident.cfm

Specifications:

HAZARDOUS Products (Manual)

Manual must be your own design.

Components:

- Checklist of **Household Hazardous Products** listing hazards associated with each product
- Checklist of **Household Hazardous Practices** listing hazards associated with each activity
- Summary Checklist of **Proper use and Disposal** of Household Hazardous Products
- Summary Checklist of **Proper Procedures to follow** when engaged in common Household Hazardous Practices
- Summary Safety Checklist

Identify Invertebrates (Game)

Your Game should challenge participants to identify common aquatic invertebrates found in **Alberta** water systems. The idea is develop identification strategies incorporated in a game situation.

Materials: Choice of materials and type of game is open (*It doesn't have to be a board game*)

Game should include:

- Aquatic Invertebrates found in Alberta Freshwater Systems
- **3D** invertebrate playing pieces would enhance presentation
- Habitat conditions and factors that affect the organism's survival and population size
- Human actions that can **positively or negatively** affect the invertebrate survival and population size

Commercial (30 sec. of fame)

30 sec. Commercial should briefly .

Format: VHS or digital.

Script should include:

- Introduction of the problem
- What effect it is having
- **Your solution**
- How people can become involved in your solution

Evaluation:

Product: (Does it apply scientific principles effectively?)
50%

Self-Evaluation
15%

Presentation:
Peer Evaluation
10%

Teacher Analysis
25%