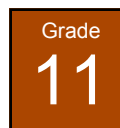


# Where Do Wastes Come From?



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Topic: Waste  
Grade: 11  
Course: Science, University/College  
Code: SNC3M  
Duration: 2 x 75 minutes

*Students will investigate the types of wastes produced by society, the methods of disposal and research alternative methods available.*

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## **Curriculum Expectations**

- WMV.01: Demonstrate an understanding of the nature and types of waste and of their management in industry and the community
- WMV.02: Conduct investigations / research and make inferences regarding the effectiveness of various waste management practices
- WM1.01: Define and give examples of such terms as solid / liquid / gaseous waste, toxic waste, heavy metals, chlorinated hydrocarbons, acid rain, ozone, greenhouse effect, etc.
- WM2.02: Explain the principles related to the management of solid waste

## **Background Information**

There are many sources of wastes in our environment. It is nearly impossible for one person to list all the waste products. Some interesting facts:

- Canadians produce 7 million tonnes of organic waste each year
- Litter can take anywhere from a few weeks to thousands of years to decompose
- To decompose by natural processes it would take – a few weeks for a piece of paper, 300 years for an aluminum can, one million years for a glass bottle
- Ontario industries produce at least two and a half SkyDomes-full of hazardous waste a year
- 27% of all food produced in North America is wasted

## **Accountability**

Students will be aware of alternative methods of disposal available for specific types of wastes.

## **Teacher Notes**

1. In groups of 4 or 5, brainstorm about different sources of wastes in the environment.
2. A reporter from each group will share 5 of the sources by recording them on the board for all to see.
3. As a class, categorize ideas under broader headings (e.g., household (non-toxic), hazardous, chemical, biological, etc.).
4. Each group should choose a heading and brainstorm additional sources of wastes under this category.

5. Each member of the group then chooses one source.
6. Lesson 2 is spent in the library conducting research on:
  - a. common methods of disposal of this source and the effect on the environment
  - b. effective alternative methods of disposal and the effect on the environment.
7. Groups will reconvene and construct a chart (see below) using large chart paper to share the information they found from research. Charts will be posted in the classroom.

Source	Common method of disposal	Effect on environment	Alternative method of disposal	Effect on environment

**Home Extension**

When students are disposing of something in their home they should ask themselves, where is this going, how long will it be there and could I dispose of it differently?

**Lesson Comments**

1. Students need to be in groups of 4 or 5
2. Assign roles to group members (recorder, reporter, time-keeper, task manager)
3. Need chart paper and markers
4. Book library or resource centre for research