



# Lesson Plan: Integrated Waste Management, Grade 10 Science (SNC20 and SNC2P)

## Introduction

Waste management programs are an important tool to help reduce our impacts on the environment. In this lesson, students will learn about the waste hierarchy and make connections between their actions and waste generation. Students will participate in class discussions touching on how waste diversion can be improved, their personal impact on the environment, and make connections between climate change and waste. Students will develop a personal action plan to reduce the amount of waste they create.

## Learning Objectives

1. Assess the environmental benefits of waste diversion programs
2. Investigate the link between waste reduction and climate change
3. Make a connection between personal habits and waste generation/waste reduction

## Resources Provided (located in the resource folder)

- Infographics:
  - How does Durham Region currently manage waste?
  - What we have accomplished over the last 20 years
  - What will impact our waste management decisions over the next 20 years
  - Waste hierarchy

## Questions

1. How does waste contribute to climate change?
2. What are the environmental benefits of waste diversion programs?
3. How can we improve the amount of waste we divert from disposal?
4. How does reducing waste help climate change?
5. What makes a material easily recyclable?

## Activity

1. As a class, look at the waste hierarchy and assess how each action may contribute or reduce climate change.
2. Have students independently brainstorm and list common waste items they create at school and home.
3. Using the list as a reference, each student will create a plan to reduce their waste. Their plan should include background research on the effectiveness of waste reduction to reduce climate change, include specific goals, how they plan to achieve each goal and their anticipated outcomes.

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4. Once each student has completed their action plan, have an open discussion with the class to share their ideas.
5. Plan a follow-up date with the class to discuss if they have implemented any of their actions or met their goals. How easy or difficult was it for them to change their waste behaviors? What challenges did they face? Did they find themselves thinking about waste disposal options more often?

## Summary

Waste management programs are an important tool to help reduce our impacts on the environment. Students are encouraged to continue to think about how waste diversion can be improved, their personal impact on the environment, and make connections between climate change and waste.

## Expanded Curriculum Connections

The Ontario Curriculum, Grade 9 and 10 Science, 2008 (revised)

### Science, Grade 10, Academic (SNC2D)

#### A. Scientific Investigation Skills and Career Exploration

- A1. Scientific Investigation Skills: demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analysing and interpreting, and communicating)

#### D. Earth and Space Science: Climate Change

- D1. Relating Science to Technology, Society, and the Environment: analyse some of the effects of climate change around the world, and assess the effectiveness of initiatives that attempt to address the issue of climate change
- D2. Developing Skills of Investigation and Communication: investigate various natural and human factors that influence Earth's climate and climate change
- D3. Understanding Basic Concepts: demonstrate an understanding of natural and human factors, including the greenhouse effect, that influence Earth's climate and contribute to climate change

### Science, Grade 10, Applied (SNC2P)

#### A. Scientific Investigation Skills and Career Exploration

- A1. Scientific Investigation Skills: demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analysing and interpreting, and communicating)

#### D. Earth and Space Science: Earth's Dynamic Climate

- D1. Relating Science to Technology, Society, and the Environment: analyse effects of human activity on climate change, and effects of climate change on living things and natural systems
- D2. Developing Skills of Investigation and Communication: investigate various natural and human factors that have an impact on climate change and global warming
- D3. Understanding Basic Concepts: demonstrate an understanding of various natural and human factors that contribute to climate change and global warming

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