

Rethink Activity:

Ecological Monitoring



mmsb.nl.ca



[mmsbnl](#)



[OurGreenerFuture](#)

DESCRIPTION

Students will monitor their waste for 7 days. At the end of the week, students will make waste reduction recommendations for their households and provide waste reduction shopping and disposal tips. Students will learn what types of things are most commonly thrown in the trash and establish ways to reduce their household's ecological footprint.

CURRICULUM OUTCOMES

Environmental Science 3205:

- 1.09** Define sustainability as a human practice to maintain ecosystem stability.
- 1.13** Identify the factors that influence sustainability. Include: ecological, social, and economic.
- 1.16** Recognize that environmental monitoring is an essential component of sustainability.
- 1.18** Identify individual impacts on the environment using the concept of ecological footprint.



BACKGROUND INFORMATION

Environmental monitoring is the process of observing change in the environment. It is an essential part of sustainability. Government environmental assessments are an example of environmental monitoring.

WHAT IS AN ECOLOGICAL FOOTPRINT?

An ecological footprint is a measure of human demand on the earth's ecosystems. It compares human demand with planet earth's ecological capacity to regenerate. It represents the amount of land and ocean area needed to regenerate the resources a human population consumes and to absorb and render harmless the corresponding waste. Ecological footprint estimates the amount of land and ocean area required to sustain an individual's consumption patterns and wastes on an annual basis.

WHAT IS SUSTAINABILITY?

Sustainability is a human practice that helps to maintain ecosystem stability without compromising the ability of future generations to meet their needs. Through sustainable practices, we have the potential to maintain the long-term well-being of the earth. As the earth's population grows, the demand for more natural resources also grows, creating a negative impact on the environment. As land is developed and natural resources are extracted from the earth, there is an impact on the surrounding environment that can actually cause the earth's natural balance to shift. Issues that influence sustainability include:

- **Social Factors:** Culture, values, attitudes, beliefs, lifestyle, and political factors.
- **Economic Factors:** Political regulations, legislation, budgets, funding, and competing priorities.
- **Ecological Factors:** Availability of freshwater, forests, oceans, wildlife, and air.



PROCEDURE

1. Using the sample table provided, students will monitor the amount of garbage that is produced in their household for 7 days. Ask students to weigh and tally the types of items that are thrown away each day.
2. At the end of the week, students will discuss with the class the items that are thrown away in their household. They will make recommendations for waste reduction in the household based on their observations.
3. The students will then monitor their households for a second week and take note of any waste reduction changes that their family was able to achieve.



DISCUSSION QUESTIONS WEEK 1

1. Which materials created the most and least waste by weight over the week?
2. Which of the materials could be recycled or reused rather than thrown away?
3. If these materials are reused or recycled, by how much could your household waste be reduced?
4. Based on your calculations, make waste reduction recommendations for your household. Take action and challenge the entire family to make small changes for one week. Monitor the waste for the second week.

DISCUSSION QUESTIONS WEEK 2

1. Which materials created the most and least waste by weight over the second week?
2. Which of the materials could be recycled or reused rather than thrown away?
3. Calculate percentage change.
4. Present results to your class.
5. Calculate the class average of waste before and after waste reduction recommendations.
6. How much waste was reduced in total?



WEEK: _____

MATERIAL		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Total
Food Waste	Weight (kg)								
	Number of items								
Beverage Containers	Weight (kg)								
	Number of items								
Plastic	Weight (kg)								
	Number of items								
Glass	Weight (kg)								
	Number of items								
Metal	Weight (kg)								
	Number of items								
Cardboard	Weight (kg)								
	Number of items								
Paper	Weight (kg)								
	Number of items								
Wood	Weight (kg)								
	Number of items								
Other	Weight (kg)								
	Number of items								

INFORMATION

For more information on this Rethink Activity, please contact MMSB at:

Marketing & Public Education Officer
 Tel: 709-753-0948 • Toll Free: 1-800-901-MMSB
 Email: inquiries@mmsb.nl.ca • Website: mmsb.nl.ca