

MMSM LESSON PLAN

– UNDERSTANDING LANDFILLS & REDUCING EMISSIONS

Introduction

Greenhouse gasses and emissions are harmful to our environment and the atmosphere. How can we reduce the amount of emissions we're putting into our atmosphere? This lesson plan teaches students about green waste and why it's important to reduce food waste.

Grade Level

Middle to Senior years – grades 5+

Thinking Concepts and Skills

- Students will learn about greenhouse gasses emitted from landfills and how these emissions are harmful to the environment.
- Increase awareness of composting so less food waste is sent to landfill.



Activate

1. Have a conversation about greenhouse gasses. What do you already know about them? How do they impact our environment?
2. Do you compost at home? Share with the rest of the class.
3. What impact does greenhouse gasses have on our atmosphere? And by extension - global warming and climate change.
4. How can we limit the amount of methane gas coming from landfill?

Acquire

1. Prepare a slideshow presentation with images showing how greenhouse gasses are emitted from landfill and how it effects the air/Ozone layer.
2. Activity 1 – You will need: two bowls filled with water, plastic wrap, a lamp, and thermometer.
3. Activity 2 – You will need: compost soil.
4. Activity 3 – You will need: worm farm and gloves.

Apply

Activity 1 – Global Warming

1. Set up the two bowls of water and cover one with plastic wrap. Record the temperature of the water in both bowls.
2. Turn on a lamp and place it directly above both bowls.
3. Set a timer for 30 minutes.
4. Check the temperature of the bowls after the 30 minutes has passed. The bowl with the plastic wrap should be warmer.
5. The plastic wrap acts like methane and other greenhouse gasses in our atmosphere.

Apply

Activity 2 – Compost Sample

1. Bring a sample of finished compost material and show what food and green waste can be turned into.
2. Explain the benefits of composting and the nutrients it gives to plants.

Activity 3 – Worm Farm

1. If your school has a worm farm, show students how waste decomposes with the help of worms to create a soil rich with nutrients.
2. Get the students to touch the soil and see what's in the worm farm box.

Extension Activities

- Have students perform a waste audit on the garbage and recycling bins in the classroom.
This lesson plan can also be found at SimplyRecycle.ca.

