



## Protecting the Environment at Roseridge

How We Monitor, Measure,  
and Prevent Waste Impacts

### Waste Doesn't Disappear — We Track It

Roseridge uses science and environmental monitoring to keep waste from harming water, air, and land.

This includes testing for leaks, tracking incoming materials, and safely storing hazardous waste.

We also weigh every load, monitor landfill gases, and follow rules that protect the environment and nearby communities.

Some waste breaks down quickly, but other items can last hundreds of years. That's why we need to manage what goes into the landfill carefully, and why this experiment will help you see for yourself what sticks around.

### Your Task: Landfill in a Bottle

Try this classroom experiment to learn how long different types of waste stick around.

You will build a mini landfill in a plastic bottle and check back over a few weeks to see what breaks down, and what doesn't.



# Let's Make A Landfill In A Bottle

## step-by-step Instructions

1. Get a clean, clear plastic bottle  
Ask an adult to help cut the top off.



2. Cover the outside  
Use a paper bag or dark paper to block sunlight  
(like dirt in a real landfill).



3. Pick your waste samples  
Choose 3-5 items like:

- \* Food waste \* Candy wrapper (plastic) \* Paper or cardboard
- \* Compostable item (tea bag, napkin) \* Aluminum foil or tin



4. Layer your bottle  
Add a bit of dirt, then a waste item. Repeat until full. Top with a final layer of dirt.



5. Add water  
Keep the top layer damp, just like in a real landfill.

## What Do You Think?

1. Which item will break down first?
2. Which ones might never break down at all?
3. What surprised you?

6. Watch and record  
Place near a sunny window and check every week. What's changing? What's not?



# TEACHER RESOURCE - Protecting the Environment at Roseridge

This lesson reinforces key messages from the video by combining waste science, environmental protection, and a hands-on experiment students can do in class or at home.

## Learning Connection

students will understand that waste is measured, monitored, and managed, not just "thrown away."

They explore how a real landfill operates and learn the importance of protecting natural systems from pollution.

students will:

- \* Recognize the role of environmental monitoring in waste management
- \* see how long different materials take to break down — and why some never do
- \* understand the risks of hazardous waste, and how it's tracked and stored
- \* Learn that landfill is not a default option, but a highly controlled one

This lesson connects scientific thinking, stewardship, and real-world waste accountability.

## Instructions

1. Guide students through the "Landfill in a Bottle" setup.
2. Encourage students to choose a mix of items.
3. Assign a tracking sheet to log weekly changes.
4. Revisit the experiment after 2–3 weeks and reflect on their predictions.

## Classroom Extensions

### 1. Decomposition Timeline Game

match common items to how long they take to break down:

- \* Paper: 2–5 months
- \* Wool sock: 1–5 years
- \* Tin can: 50–100 years
- \* 6-pack ring: 450 years
- \* Plastic bottle: Forever

### 2. Hazardous Waste Hunt

make a safe list of household items that shouldn't go in the garbage (batteries, paint, etc.).





### 3. Weigh-In Activity

simulate the scale process by weighing school backpacks to understand how Roseridge tracks waste in and out.

### 4. Litter Map

walk the schoolyard or playground, map litter, and brainstorm how to stop it.

## Core Ideas Reinforced

- \* waste doesn't disappear — it stays somewhere
- \* some waste is dangerous and must be handled carefully
- \* Real places like Roseridge use science and rules to protect the environment
- \* Your choices like using less, recycling right, and storing hazardous items, make a difference



**roseridge.org**  
info@roseridge.ab.ca