

WASTE FACILITY TOUR FOR SCHOOLS



PRE-TOUR ACTIVITIES

Solid waste management involves complex systems and challenging choices. Metro Vancouver is responsible for waste reduction, recycling planning, and the operation of several solid waste facilities in the region. Recycling and waste centres are found across Metro Vancouver where residents and businesses drop off garbage, yard trimmings, and a variety of recyclable materials. Most of the garbage produced in the region ends up at the Vancouver Landfill, owned and operated by the City of Vancouver. One quarter of our garbage goes to the Metro Vancouver Waste-to-Energy Facility, where it is burned to generate electricity.

Ahead of your waste facility tour, we encourage you to facilitate these activities to explore the problem of waste, and to begin thinking about how waste is managed in our region.

ACTIVITY I: AN OVERVIEW OF THE PROBLEM OF WASTE (15 – 20 MINUTES)

1. As a group, watch the video [“What are people throwing out in 2018”](#) (Metro Vancouver, 4:26).
2. Convene a brief discussion to generate ideas on what makes up our waste in Metro Vancouver. Questions might include:
 - What did you notice about waste? What is waste made up of?
 - What was surprising? What wasn’t surprising?
 - Why is this amount of garbage produced, given that we recycle and compost?
3. Optional: As this video is a few years old, students may be interested in exploring up-to-date information. Choose from:
 - a. Two minutes: Provide updated data from a recent waste composition study (Metro Vancouver, 2022) by sharing the infographic on page four of the [Metro Vancouver Waste System Overview](#)
 - b. Ten minutes: Lead students through the Inquiry Spark [What’s In Our Garbage? Exploring The Top Six2fix](#)

ACTIVITY II: WHERE DOES OUR GARBAGE GO? (20 – 30 MINUTES)

1. Facilitate Part 2 of the [Where Does Your Garbage Go?](#) Inquiry Spark to find solid waste facilities across Metro Vancouver and discover what happens at these facilities.
2. Discuss:
 - What options are there for disposal of our waste?
 - What can you do to reduce the waste you produce at home?
 - Why do we need to reduce waste?
 - Is it possible for your home or school to be zero waste? What would it look like? What would need to change?



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ACTIVITY III: METRO VANCOUVER'S WASTE-TO-ENERGY FACILITY

PART 1: DESIGN A WASTE-TO-ENERGY FACILITY (30 MINUTES)

1. Introduce the idea of a waste-to-energy facility by asking students to think about the name. Ask students to think about why a community would need this kind of facility and what might happen there. In small groups, have students discuss for two to three minutes to share their individual ideas.
2. Provide one large sheet of chart paper and a selection of wide-tipped colour markers to each group.
3. Review these instructions with students:
 - a. Before drawing, you have two minutes to work together to find out what tasks each person in your group is interested in doing and decide how to ensure everyone is involved in the activity. Available tasks could include timekeeper, sketching, labeling, developing questions, making notes, and reporting. More than one person can be involved in each of these.
 - b. Then, using five minutes, make a sketch of what you think a waste-to-energy facility might look like, and what key parts make up the facility. Add in as much detail as possible, including how these parts might be connected and labels that describe what happens.



PART 2: WHAT HAPPENS AT THE WASTE-TO-ENERGY FACILITY? (20 MINUTES)

1. In small groups, have students review the [Waste-to-Energy Fact Sheet](#) and discuss questions, such as:
 - Where is garbage burned?
 - What happens to the smoke produced?
 - Where is electricity generated?
 - What is happening throughout the facility?
 - How do you expect it might feel in different places of the facility?
 - How does this facility fit into the regional waste management system?
2. Ask students to compare the Waste-to-Energy Facility graphic on page 2 of the Fact Sheet to their drawing from Part 1. Discuss as a group what components are similar, what is different, and why that might be.
3. Optional: As a group, watch these videos:
 - "[Waste-to-Energy Facility – Overview](#)" (Metro Vancouver, 3:52).
 - "[Metro Vancouver Waste-to-Energy Facility Virtual Tour](#)" (Metro Vancouver, 3:15).



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ACTIVITY IV: BUILD WASTE WONDERS (15 - 20 MINUTES)

1. In small groups, have students focus on recalling all the questions (e.g. on waste, waste management facilities, recycling and other waste reduction solutions)) that have come up so far, recording them on a piece of paper.
2. Have small groups select their best three questions about the waste facility they will be visiting by circling or highlighting the questions. Suggest that questions should be those that can be used to help with learning during the tour as well as afterwards, when you return to class.
3. Have each group share their three questions with the class. This could be a walkabout so students can circulate from table to table to see each group's collection of questions, as well as the three they chose, or a verbal report out by each group.
4. Wrap up by acknowledging that these questions are a starting point for their learning about waste in the region. Some of these will be answered during the tour and others require them to explore afterwards.
5. Capture all questions in a format that suits you (i.e. photos of students' questions, photocopy, or a text document). These can be revisited when you return to school afterwards such as for students' self-assessment.

Option: We invite you to share these questions by email (teacher@metrovancover.org)



RESOURCES

[Metro Vancouver Solid Waste System Fact Sheet](#)

[K-12 Curriculum Connections – Solid Waste](#)

[K-12 Resources – Solid Waste](#)



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