

GRADE 6 LEARNING EXPERIENCE

Plastics in the Schoolyard

Summary

In this hands-on lesson, students learn about proper waste sorting and put their knowledge to work by doing a garbage clean up around the school. Students use their detective skills to determine that the majority of litter is made of plastic.

Objective

To encourage students to recycle plastics so they do not end up in a landfill or in the ocean.

Pre-Activity

SCHOOLYARD CLEANUP

DIRECTIONS

THINK-PAIR-SHARE

Start by doing a “Think-Pair-Share” activity about sorting waste. On scrap paper, have each student write down what they know about proper waste sorting. (e.g. what goes in the recycling bin?) Then, ask them to find a partner and share what they wrote. Bring the whole class together and ask a few students to share what they wrote.

Show the class the sorting guide for your region/ municipality, and discuss it as a class. You can find your local sorting guide by visiting Divert NS. divertns.ca/recycling/sorting-guide

OUTDOOR CLEANUP

Hold an outdoor Garbage Treasure Hunt! Students should think of the plastic garbage as treasure, as it can be used again (recycled) if disposed of the right way. Break the class into groups and give each a bag and protective gloves.

OPTIONS Sign your class up for a litter clean up in your area, like the **Great Nova Scotia Pick-Me-Up**. www.nspickmeup.ca/

This would make a great **Earth Day activity (April 22)**

Once the yard is clean, have students sort each item into the correct bin (garbage, recyclables, organics, refundables, paper). Tally their results using the Classroom Waste Data sheet. They will notice that the majority of the items they collect are made of plastic.

Note: *Plastics found outside that are too dirty will have to be disposed of as garbage—but you can tally them with your plastics, as they should have been recycled.*

MAIN LEARNING OUTCOME

GRADE:

6

SUBJECT:

Social Studies



Learners will implement age appropriate actions that demonstrate responsibility as global citizens.

SKILLS

Select

Locate several relevant and dependable details to support an answer

Plan

Identify steps to solve the problem. Execute the steps, modifying as necessary.

Evaluate

Review steps and results from an investigation or problem solving. Reflect on varying perspectives and alternative solutions or findings. Identify potential new problems and/or issues.

Apply

Carry out or complete a procedure/ technique

MATERIALS

Scrap paper

Internet and projector or viewing devices

DURATION

10-15 mins

MATERIALS

Garbage bags
Protective gloves

Appendix 1

Classroom Waste Data Worksheet

DURATION

30-60 mins

English Language Arts



Learners will use writing and other representations to explore, clarify and reflect upon thoughts and experiences.

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WASTE REDUCTION EDUCATORS

Divert NS provides funding to municipalities to deliver waste reduction education to schools across the province.

Your local waste reduction educator(s) provides the following services, and more, free of charge!

- classroom presentations
- green team set up
- advice on bins and signage
- tours of local waste facilities
- school waste audits

To find out more, visit divertns.ca

[divertNS.ca](http://divertns.ca)



Share on social media!
#NothingWasted

Activity VIDEO AND DISCUSSION

DIRECTIONS

After identifying that most of the garbage collected around the school yard was made of plastic, ask the students what they think happens to plastic once it is discarded into a garbage or recycling bin.

DURATION
5–10 min

Show students the video “**What really happens to the plastic you throw away,**” then give them the **Video Comprehension Sheet (Appx 2)**.

www.youtube.com/watch?v=_6xINyWpPB8

(04:00 / Source: TED Ed YouTube video by Emma Bryce)

MATERIALS
Internet and projector

Appendix 2:
Comprehension Sheet

DURATION
30 min

OPTION INQUIRY BASED LEARNING OPPORTUNITY

Instead of the Comprehension Sheet, students work on a reflection piece (one-pager), detailing what they learned from the video and the different processes all three bottles would have gone through.

Encourage students to express their thoughts on all three processes, and the one that led to the least amount of waste.

Post-Activity \$2 SUMMARY

DIRECTIONS

Ask the student to write a “**\$2 Summary**” about what they learned from the video. Each word they write is worth 10 cents and they must write enough words to equal \$2. They must include the words **Plastic**, **Garbage** and **Recycle** in their summary.

MATERIALS
Paper and pencils

DURATION
5–10 min

OPTION If students do a reflection piece in Main Activity instead of the Comprehension Sheet, the \$2 summary could be done in groups.

Assessment

FORMATIVE Observe students throughout the activity to check understanding and comprehension.

SUMMATIVE (OPTIONAL) Option to evaluate the video comprehension questions or the \$2 summary

ABOUT DIVERT NS

Divert NS is a not-for-profit organization championing recycling in Nova Scotia. For over 20 years we’ve helped build a culture of recycling through environmental stewardship, education, and innovation. Divert NS operates the **Beverage Container Deposit–Refund Program** and the **Used Tire Management Program**. In addition, we work in collaboration with government,

industry, and academia to divert waste-resources from landfill. Divert NS, in partnership with municipalities, delivers education and awareness programs to schools, businesses, and community groups. Divert NS also works to develop stewardship agreements and funds innovative research and development initiatives.

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APPENDIX 1
PLASTICS IN THE SCHOOLYARD

Classroom Waste Data Worksheet

Date:

Names of Group Members:

For every item you put in the **garbage, recyclables, refundables, paper** or **organics** bins, mark a tally line in the space below.

Don't forget to tally in groups of five. 

Organics	Recyclables	Refundables	Paper	Garbage

What material did you find the most?
(glass, paper, cardboard, styrofoam, plastic or other)

APPENDIX 2

PLASTICS IN THE SCHOOLYARD

Video Comprehension Sheet

After sorting all that litter, you probably noticed that most of it was made of plastic. Plastic can be easily recycled in Nova Scotia, but what happens to the plastic that ends up in landfills or waterways?

Watch “**What really happens to the plastic you throw away**” (by Emma Bryce) to find out, then answer the questions below.

- New plastic is made from:
 - Oil
 - Water
 - Milk
 - Honey
- Which process best describes the “**life**” of a plastic bottle?
 - Liquid plastic is poured into a plastic bottle mold > The bottle is discarded > The liquid is consumed > Pellets are melted > The new bottles are filled with liquid
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- Leachate**, is a harmful chemical that is made when rainwater mixes with chemicals found in plastics. When leachate leaks out of landfills, it can:
 - move into groundwater
 - move into soil
 - move into streams
 - All of the above
- In the video, **Bottle #2** ends up in the “Great Pacific Garbage Patch.” Pause the video at the 02:23 mark and answer the following question:
What is the name of the floating garbage patch closest to Nova Scotia?
 - Indian Ocean Gyre
 - The South Atlantic Gyre
 - South Pacific Gyre
 - The North Atlantic Gyre
- According to the video, what happens when sea animals, like turtles, eat plastic?
 - They don’t eat plastic.
 - Nothing happens. They simply eat it and then digest it.
 - They feel full, so they don’t eat, and end up starving to death.
 - It makes them healthy and strong.
- In the video, it explains that humans end up ingesting plastic. How does this happen?
 - By drinking water with plastic in it.
 - The plastic moves up the food chain. First it is eaten by a small lantern fish, which is eaten by a squid, which is eaten by a tuna and then we humans eat the tuna.
 - By eating food off of plastic dishes.
 - By swimming in the ocean.
- In the video, what happens to **Bottle #3**?
 - It is thrown on the ground as litter.
 - It is put in the ocean.
 - It is reused to hold a new liquid.
 - It is recycled and turned into something new, such as a jacket or an umbrella.

For more information on recycling in Nova Scotia visit divertns.ca