

Our Environmental Footprint

Transportation Situation



Description of Lesson

How do you move? Every single day we go to school, to work, to our friends' houses. The way that we move makes a big difference. In this lesson, students will explore how the decisions that they make in regards to their transportation can impact the environment.

Connect with the Georgian Bay Biosphere

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GEORGIAN BAY
BIOSPHERE
MNIDOO GAMII
Spirit of the Water

Georgian Bay Biosphere: Lesson in a Backpack Program

At a Glance

Grade Level: 1 and 2

Learning Environment:
Indoor Classroom and
Community

Prep Time: 15 minutes

Length of Lesson: 1 hour

Key Vocabulary: energy, gas,
pollution, green

Staffing: 2 adults

Materials:
Transportation cards
Clipboards, observation
worksheets
none
Paper and art materials (pencil
crayons, crayons, markers, etc.)
Environmental footprint tree

All materials are available from the GBB. To get this resource, call (705) 774-0978.

Groupings: Whole class, and
Small groups of 2 or 3

Teaching/Learning Strategies:
Hands-on learning, game,
exploration and observation

Lesson Outline

TIME	ACTIVITY	LOCATION	MATERIALS NEEDED
5 minutes	Getting to School & Other Places	Classroom	None
10 minutes	Getting Around: the Good, the Bad, and the Ugly	Classroom	Transportation cards (page 12-17)
30 minutes	Walk About: Neighbourhood	Community	Clipboards, Worksheets (pages 7-11)
20 minutes	Show and Tell	Classroom	None
20 minutes	Our “Transportation Aspirations”	Classroom	Paper and art materials (pencil crayons, crayons, markers, etc.)
5 minutes	Transportation Wrap-Up: Count Yourself In!	Classroom	Environmental footprint tree

Curriculum Expectations Grade 1 and 2 Science and Technology

Grade 1: Understanding Life Systems-Needs and Characteristics of Living Things

Overall Expectations

1. Assess the role of humans in maintaining a healthy environment

Specific Expectations

- 1.1 Identify personal action that they themselves can take to help maintain a healthy environment for living things, including humans.

Grade 2: Understanding Life Systems-Growth and Changes in Animals

Overall Expectations

1. Assess ways in which animals have an impact on society and the environment, and ways in which humans have an impact on animals and the places where they live.

Specific Expectations

- 1.2 Identify positive and negative impacts that different kinds of human activity have on animals and where they live.

Teaching and Learning

Part A. Getting to School & Other Places

Discuss how the students get to school. Make a list titled “how we get around” using the students answers.

Ask students to name other ways that humans move around. Add these ideas to the list. Explain that all the ways that humans get around are forms of transportation.

Part B. Getting Around: The Good, the Bad, and the Ugly

Give each student a “transportation card”. Have students move around the class acting out their cards but not talking. Once they have met another person who is acting out the same type of transportation as them (there will be two of each), they will team up.

Once everybody is teamed up, have them make sure that they are all partnered up correctly.

Discuss each form of transportation and why it is better or worse for the environment. Start with the question “what are some things that make transportation bad for the earth?” (They use energy (gas/batteries) and produce pollution).

Using the points brought up from the discussion, have the class divide themselves based on how “green” they are. On one side of the class will be the students who acted a method of “green” transportation (does not use gasoline, produce pollution or make noise). The other side of the class will be those that use energy (batteries/gas) and make pollution.

Discuss things that students could do to shrink their transportation footprint.

Make a list of these ideas for later use with the “environmental footprint tree”.

Part C. Walk About: Neighbourhood Investigation

Tell the students that they will be taking a walk around the neighbourhood. Separate the class into four groups. The groups will be in charge of different things during the walk.

Group 1: Think about what we would miss if we were driving. Make sure to notice all the small things (plants, animals, sunshine, trees, friends, etc.).

Group 2: Count 20 vehicles that pass by and observe the number of people in each one. If possible, have the students also make note of the type of vehicle (truck, big/small car, van, etc.).

Group 3: Make a tally of the number of cars, buses, trucks, trains, bikes, and pedestrians that they see. Also notice bike racks and parking lots.

Group 4: Observe where in the area you can walk, bike, rollerblade, etc. Are there big shoulders on the road? Are there any trails?



Give each group a clipboard (provided) and some paper so that they can write down their observations. Charts for each group are provided to help the students record their observations.

Take the students on a walk (20 minutes) around the neighbourhood or school area.



Part D. Show and Tell

After the walk, have each group give the class a “show and tell” presentation about what they learned about their community on their walk. Things to talk about could include...

GROUP 1: You could miss plants, animals, trees, sunshine, friends, conversations, scenery, etc. The moral: fast is not everything.

GROUP 2: Why would it be better if more people carpooled? Why are more people not carpooling? What are some situations where students could carpool?

GROUP 3: What were some good things you noticed (small cars, people walking?) How many bike racks/bus stops? What changes could be made that would be better for the environment? (smaller cars, more walkers, bike paths/racks, carpooling, etc.)

GROUP 4: Could any more trails be created? Could a bike lane fit on the road? Do you think that if more trails were built then more people would walk or bike?

Part E. Our Transportation Aspirations

On the chalkboard, write: “To shrink our transportation footprint, our future school could have_____”.

2. Have the students respond to the statement by drawing a picture of an aspect of “green transportation” that could be part of an ideal “future school”. Encourage them to use ideas from the “show and tell” discussion. If they are struggling to think of an idea, below is a list to choose from:

- Bus stops
- Bike racks
- Bike trails in the forest
- Bike lanes on the road
- People carpooling
- People walking
- Smaller cars
- Less pollution in the air
- People biking/rollerblading/skateboarding
- Less cars in the parking lot

Note: This activity can be done in several ways. For a younger age, or a less complex option, students can simply draw pictures on individual pieces of paper.

Or, ensure that every student is drawing a unique idea and make a book out all the student's pages. Some students could be in charge of drawing a cover page and giving the book a title.

For an older age or more involved option, have each student draw a map of the school and surrounding area, labeling all the things that could be added or changed to give the school a smaller transportation footprint. Tell them that this will be an imaginary "future school", in a perfect world.

Finally, to make this more of a group activity, assign each student an aspect of "green transportation" and have them work together to draw a large map of the "future" school on newsprint paper. You can help them by first drawing the outline of the school.

Part F. Count Yourself In!

From the list of transportation conservation ideas, have students choose 5 ways that they can shrink their transportation footprint.

Encourage students to do these things. When they do, have them fill out a leaf and put it on the Environmental Footprint Tree.

Making a Cultural Connection

Traditionally, Ojibwe often travelled by birch bark canoes. These canoes were strong, light, and were able to carry very heavy loads.

In Summer 2018, the Shawanaga First Nation Healing Centre hosted a Wiigwaasi Jiimaanke – a birch bark canoe build. They harvested and gathered for the first two weeks in July and built the Jiimaan, canoe, in the last two weeks of August. Everything used to build the Jiimaan, comes from the land. They used spruce roots to sew the birch together, cedar for the gunwales, spruce pitch to patch the holes from sewing, iron wood for mallets to split the cedar – and of course, white birch for the Jiimaan itself! The days were long and well spent, a lot of patience, gratitude and love has been shared with the Jiimaan. On Friday August 30th, 2018 we celebrated the birth of the Jiimaan on Mnidoo Gamii, Georgian Bay!

More at www.gbbr.ca/wiigwaas-jiimaan/



Photos: Kyla Judge

Extension Activities

Community and Home Engagement Activities

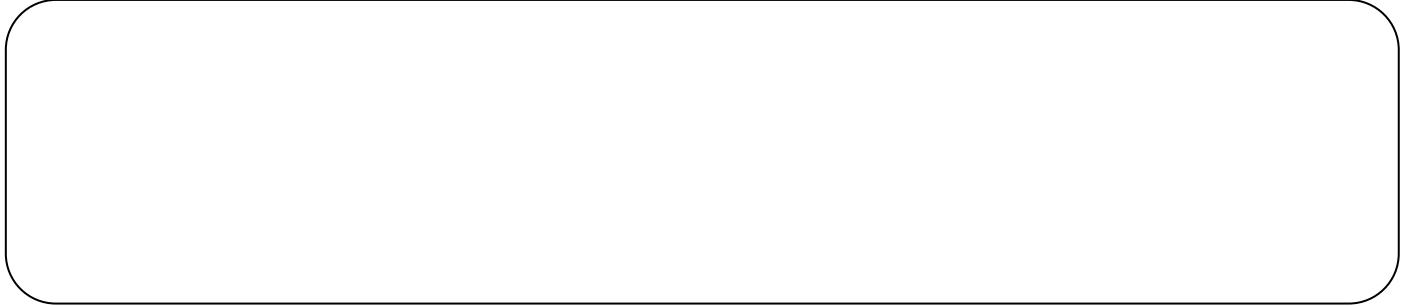
Ask students to be observant the next time they are walking or driving around town with their parents. Did they see any good places to ride a bike, or any places that could use bike paths or bike lanes?

Talk to the students about the possibility of setting up a walking school bus with classmates in their neighbourhood.

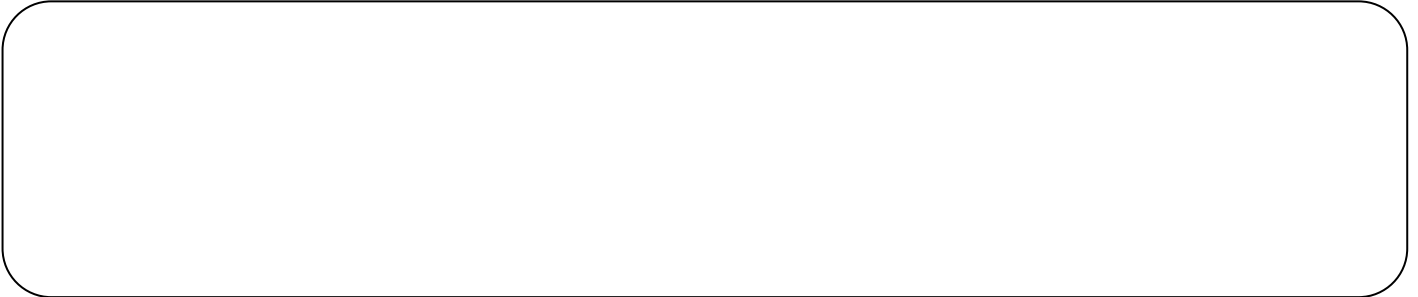


GROUP ONE: Things we would miss if we were driving.

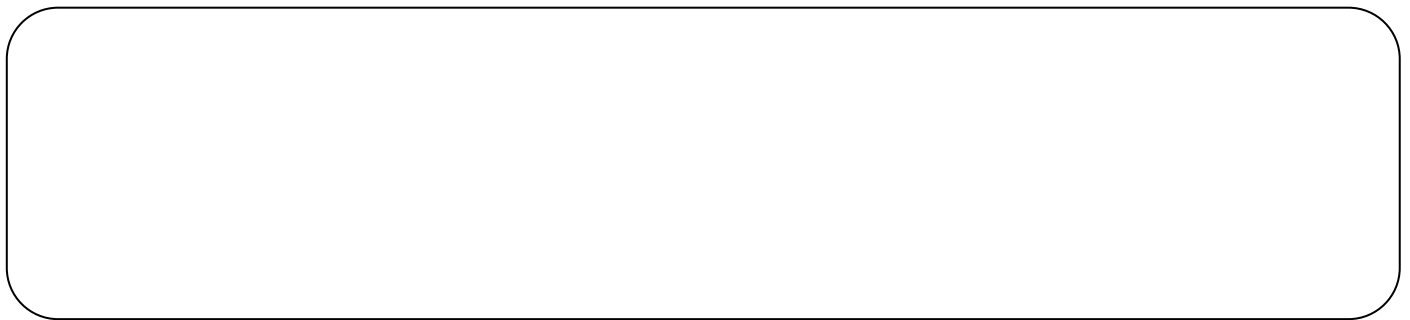
If we were driving we would not get to see...



If we were driving we would not get to hear...



If we were driving we would not get to smell...



Other things we would miss if we were driving...



GROUP TWO: How many people carpool in our neighbourhood?

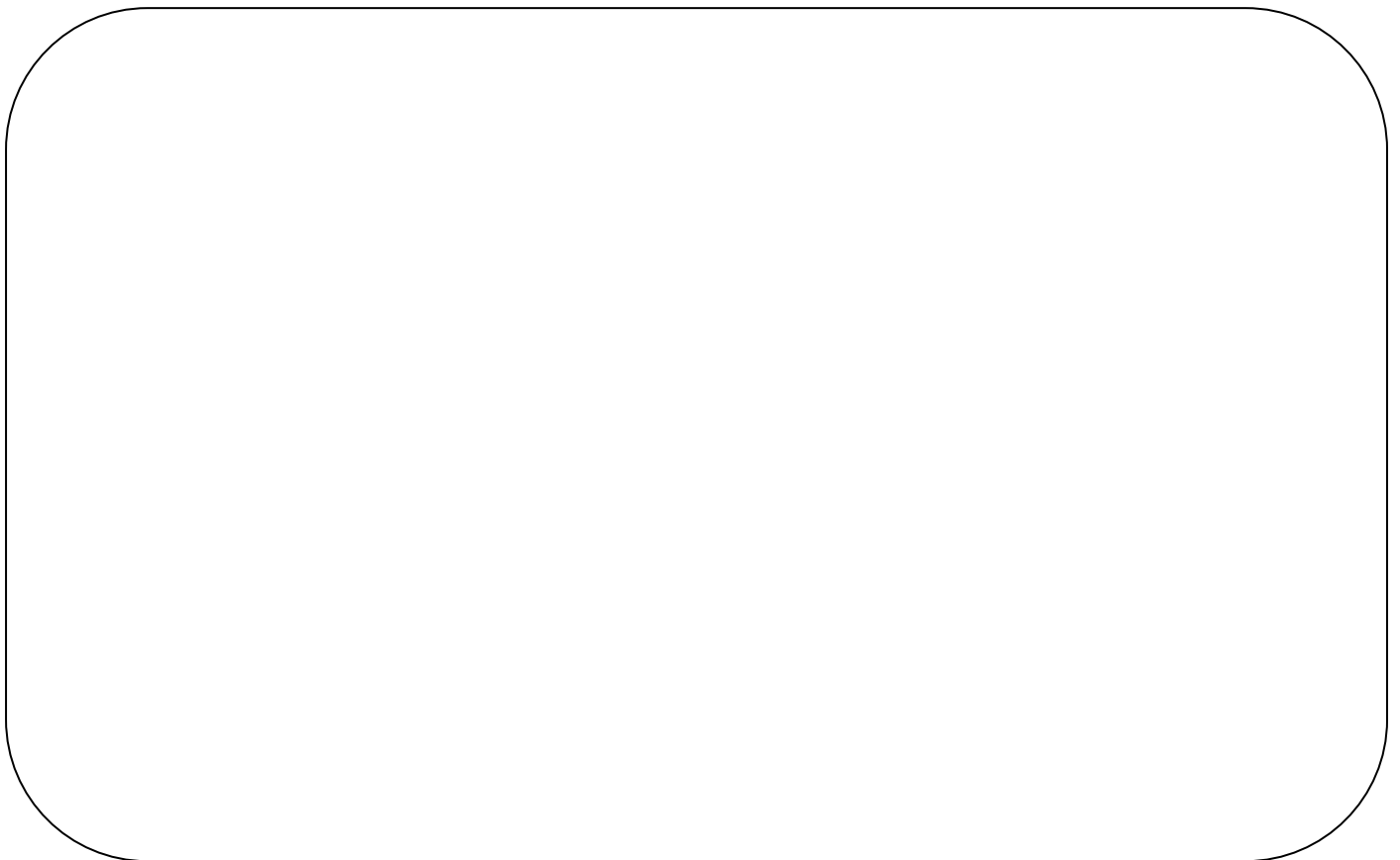
Vehicle Number	Type of Vehicle (Car/Truck/Van?)	Number of People in Each Vehicle
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Most vehicles had _____ people/person in them.

Name some situations where people would have to drive alone.

A large, empty rounded rectangular box with a thin black border, intended for writing answers to the question above.

Name some situations where people could ride together (carpool), to make less pollution and save fuel.

A large, empty rounded rectangular box with a thin black border, intended for writing answers to the question above.

GROUP THREE: What type of transportation exists around our school?

Mark a tally in the correct box every time you see one of the following items.

CARS

BUSES

TRUCKS

TRAINS

BIKES

PEOPLE WALKING

BIKE RACKS

BUS STOPS

PARKING LOTS

OTHER THINGS WE NOTICED RELATED TO TRANSPORTATION:

GROUP FOUR: The “green” transportation options in our neighbourhood!

Try to notice all the areas that are meant for people to walk, bike, rollerblade, and get around without vehicles. Look for trails, sidewalks, bike lanes, etc. Try to draw a map of the area and label the areas that have “green” transportation options.

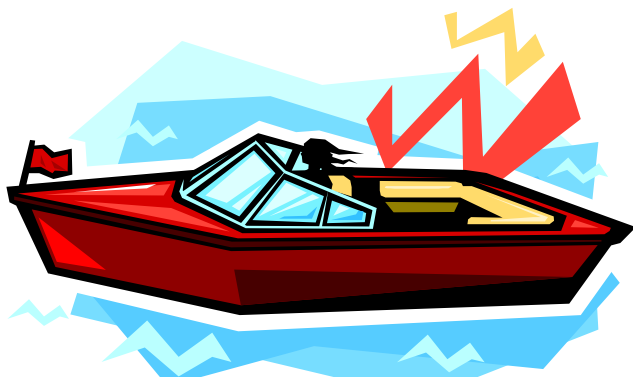
Could any trails, bike paths, or sidewalks be created?



Car



Car



Motor Boat



Motor Boat



Row Boat



Row Boat



Sailboat



Sailboat



Walking



Walking



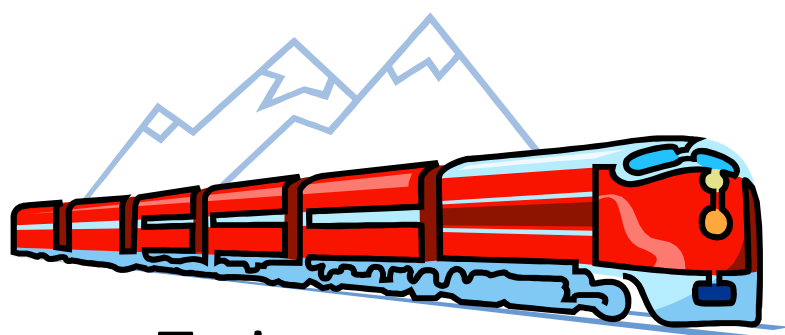
Rollerblading



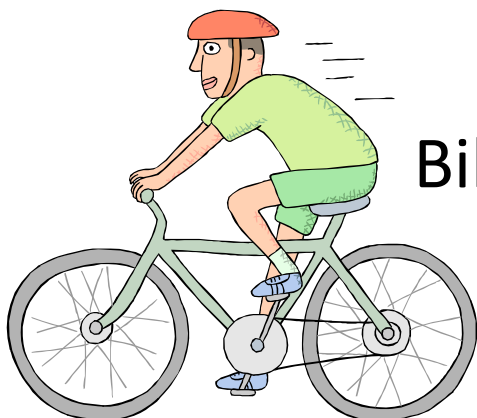
Rollerblading



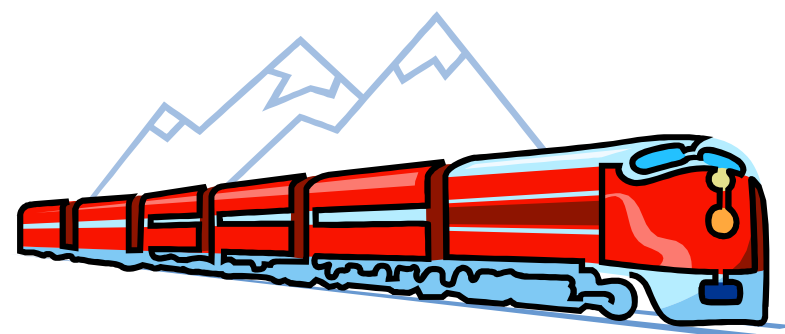
Bike



Train



Bike



Train



Airplane



Airplane



Skateboard



Skateboard



School Bus



School Bus



Car



Motor Boat



Row Boat



Sailboat



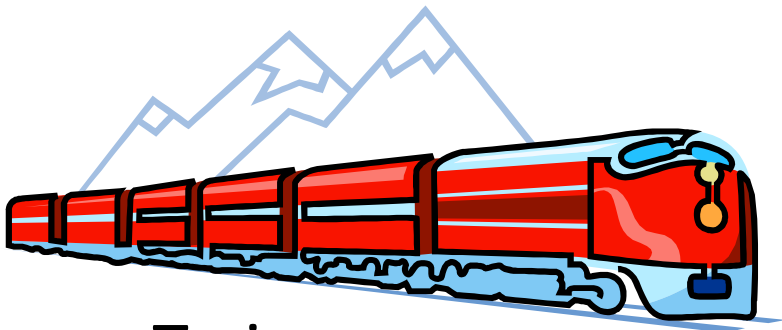
Walking



Rollerblading



Bike



Train