

## Time

2-3 periods

## Targeted Curriculum Expectations

- recommend ways in which individuals can contribute to the quality of life in their home, local ecozone, province, nation and the world.
- evaluate solutions to environmental problems proposed by various groups and make recommendations for sustainable resource use
- collect and synthesize information about the local ecozone

## Background Information

Students reflect on how their everyday actions and the community around them can impact climate change. Students are asked to examine their daily actions and minor adaptations in lifestyle can make a difference. Students will complete a climate change self-awareness audit and take a community walk to identify natural, human, and built systems that impact climate change. They will look for evidence of systems or features that have been adapted and/or mitigated to climate change.

## Teaching/Learning Sequence

### Individual Activity → Climate Change Home Audit

- a) As a home assignment, ask students to complete the Climate Change Self Awareness Audit BLM 4.1. Students must choose morning routine, during school hours, after school activities, or night time routines.
- b) In small group ask students to share their results. Discuss the combined impacts of over one million people living in the Region of Peel. Ask students if they can quantify the impacts and adaptations? e.g. A regular flush toilet uses 13 litres of water X 1 million people versus a low flow toilet which uses 4 litres X 1 million people.

### **ACTION!...**

#### Whole Class Activity → Climate Change Tour

#### Pre-tour tasks:

- a) Plan route and print maps of area
- b) Collect permission forms
- c) Identify any safety concerns and required time prior to the tour.
- d) Ensure there are enough digital cameras/cell phone cameras for the students (or sketching materials)

### The Tour...

- a) In groups of three or four, students take a walk in their local neighborhood to take pictures or make sketches of natural, human, and built systems or features that are affected by changes in climate. Possible stop could include:

<ul style="list-style-type: none"><li>•Bike paths/and or symbols</li><li>•Cars/School Buses</li><li>•Traffic Lights (LED)</li><li>•Houses with Trees/Rain Barrels/Natural Landscaping</li><li>•Agricultural Lands/Gardens</li><li>•Grocery Store (Local Products)</li><li>•Water Ways (Water conservation)</li><li>•Natural Areas (Parks)</li><li>•Restaurants (Local Food)</li><li>•Transit Bus or Stops</li><li>•Storm sewers</li><li>•Industries</li></ul>	<ul style="list-style-type: none"><li>•Cooling Centers (Library/Community Centres)</li><li>•Home with or without cooling systems</li><li>•Urban Forests</li><li>•Parking Lots</li><li>•School Yard (with or without urban trees)</li><li>•Traffic Congestion</li><li>•No idling zones</li><li>•Clothes Lines</li><li>•Hospitals</li><li>•Homeless Shelters</li></ul>
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- b) Individually students are required to take two pictures in each of the three categories (natural, human, built).

### **CONSOLIDATION and CONNECTION**

- a) After the walk students will individually reflect on how these features can be adapted and/or mitigated to climate change. Students are to post sticky notes on each photograph describing how the feature or system positively or negatively affect climate change and has been or can be adapted to climate change.
- b) Mapping the interconnections. Create a large foundation map of the community walk. Post on the classroom wall.
- c) Students sort photographs into categories and create map symbols for the categorized features
- d) Students place symbols in appropriate places around the map.
- e) Individually ask students to post three of their photographs around the map.
- f) After all students have posted, provide each student with three pieces of yarn.
- g) Individually, students must find at least three climate change interconnections among the features/systems in the Region. Students use string or markers to create a web of climate change interconnection on the map. Using sticky notes, students must describe their chosen interconnections and post it on the map.
- e) **Consolidation Questions: (Can be used for assessment purposes)**
1. Name 2 human systems, 2 natural, and 2 built features in your community that will be impacted by climate change. How can these features be adapted to deal with the changes in climate?
  2. How do you feel individual people in the community can adapt to the impacts of climate change? How can you adapt your actions?
  3. List five criteria that are essential in planning a community that will help adapt and/or mitigate climate change.



## Extensions

1. Have students take the carbon footprint test.

Visit: <http://www.peelregion.ca/planning/ecofootprint/> to take a Carbon footprint test.

3. Research a community agency, non-profit or government organization that is working to reduce the impact of climate change.

a) Describe the actions that the organization does to reduce the impacts of climate change.

2. Visit [http://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_carbon\\_dioxide\\_emissions\\_per\\_capita](http://en.wikipedia.org/wiki/List_of_countries_by_carbon_dioxide_emissions_per_capita)

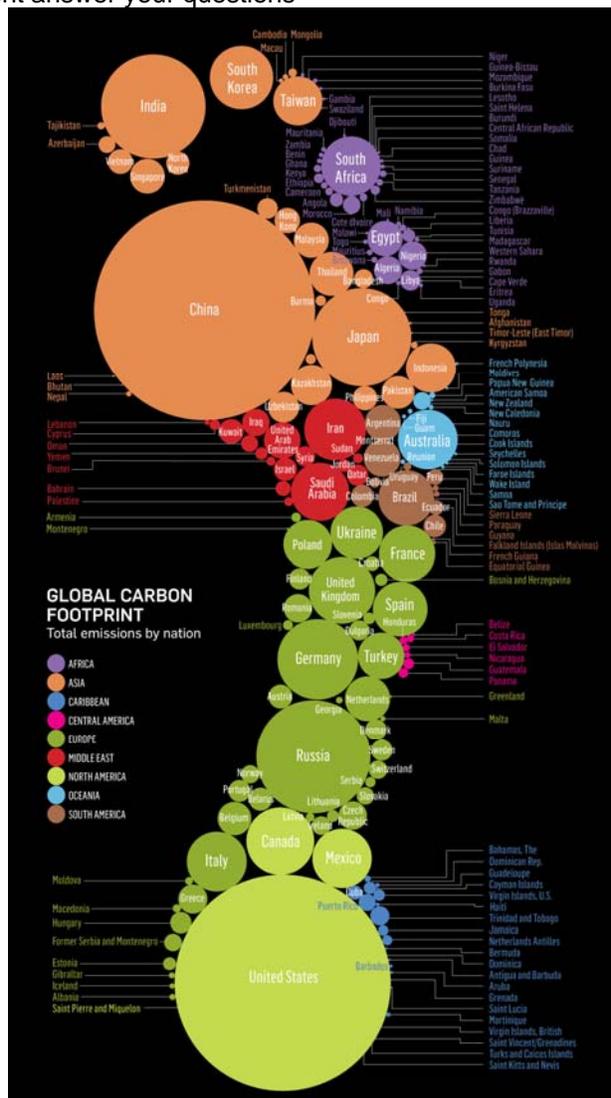
Have students use the data presented in the chart to graph the carbon emission of Canada compared to 3 other countries in the world.

Or review the following image:

[http://s3files.core77.com/blog/images/2011/04/Stanford\\_Kay-Carbon\\_Footprint\\_Infographic-full.jpg](http://s3files.core77.com/blog/images/2011/04/Stanford_Kay-Carbon_Footprint_Infographic-full.jpg)

a) Ask students to create three questions about their graph

b) Have another student answer your questions



(Source: [http://s3files.core77.com/blog/images/2011/04/Stanford\\_Kay-Carbon\\_Footprint\\_Infographic-full.jpg](http://s3files.core77.com/blog/images/2011/04/Stanford_Kay-Carbon_Footprint_Infographic-full.jpg))



# Personal Climate Change Audit Tracking Sheet

Describe your action	How does this action impact climate change.	Are you willing to modify or eliminate this action to adapt to climate change? (Circle your choice) Explain.
Take bus to school	The bus emits GHG gases which contribute to the Greenhouse effect.	<b>Modify</b> Eliminate Not at this time Will never change <b>Explanation:</b> <b>Will ride my bike during fall and spring months</b>
		Modify Eliminate Not at this time Will never change Explanation:
		Modify Eliminate Not at this time Will never change Explanation:
		Modify Eliminate Not at this time Will never change Explanation:
		Modify Eliminate Not at this time Will never change Explanation: