VENTURERS
Climate Change Crest Requirements

What do you think about climate change? Is it for real? Is it happening?
Scientists say that an accumulation of greenhouse gases (GHGs) in the atmosphere will trap heat and raise the average global temperature. Warmer temperatures will change climate patterns and result in strange weather. Canada is the third largest emitter of GHGs per capita. Should this bother us as Canadians? Should it bother you? Check out these facts:

FACT: Freak weather such as droughts, severe storms, heat waves and forest fires has increased over the past decade. The 1980s and 1990s are the warmest decades on record.

FACT: Ice caps, snow roads and polar bear habitat are disappearing in the Canadian North due to rising temperatures. Northern communities are struggling to cope.

FACT: Warmer temperatures make Canada a more favourable breeding ground for mosquito-carrying diseases such as malaria, West Nile virus and others. Wildlife and human health is at risk.

FACT: Ecosystems, habitats and animal species are becoming stressed. They are vulnerable to small changes in temperature and precipitation and may not readily adapt.

FACT: Our cities and infrastructure are not built to handle the conditions we could experience under climate change.

FACT: Industrial countries like Canada are responsible for most of the global warming phenomena. However, poorer, less developed countries are overwhelmingly experiencing the worst impacts.

FACT: Climate change isn't just about big industry. Individual Canadians are responsible for almost ¼ of Canada's greenhouse gas emissions though home energy use and transportation.

Change the Facts: Earn the Climate Change Crest

Become part of the solution instead of part of the problem.

Requirements

1. **Determine how you contribute to the problem.** The average Canadian emits about 5 tonnes of greenhouse gases a year. At standard temperature and pressure, that volume of gas would fill 5 average-sized, two-storey, three-bedroom houses. Figure out how many greenhouse gases you emit per year at: http://www.climatechange.gc.ca/onetonne/calculator/english/.

2. **Now change the facts. Commit to a goal to reduce your greenhouse gas emissions by 20%.** You can reach this goal by yourself, or pool the reduction targets of your company and achieve it together. Keep track of your progress with the on-line calculator you used in part 1 or on a separate tally sheet.

   a) Do **both** of the following to start working toward your reduction goal:

   - Transportation accounts for half of the emissions from individual Canadians, and 18% of Canada's total emissions. Change this fact by reducing your personal contribution to the problem. Make a commitment and a plan to reduce the number of trips you make per week as a single occupant in a car. Substitute with car pooling, public transit or active transit

(biking, walking, running, in-line skating, skateboarding, etc.) To kick-start the challenge, register your company in the Commuter Challenge *http://www.commuterchallenge.ca* – and consider getting a Scout troop to join you as well! ***Calculate your achievement on the on-line calculator.***

- Individual homes account for the other 50% of greenhouse gas emissions by Canadians. Change this fact by auditing the energy use of your home. The calculator you used in step one provides many suggestions on how your home uses energy and how you can increase its energy efficiency. Develop an energy reduction plan. Together with your parents, implement energy saving initiatives, retrofits or replacements. Estimate how many greenhouse gas emissions you have avoided through the renovations. ***Calculate your achievement on the on-line calculator.***

b) Do as many of the following (or other initiatives you develop yourself) to help you reach your emission reduction target. Each item has a GHG reduction value you can count toward your individual or group reduction goal.

- A simple thing like maintaining optimal tire pressure for your car can reduce car fuel use and emissions by 50%. Most people don't know this. You can set up a tire pressure clinic and increase public awareness about keeping car tires properly inflated by checking them on a monthly basis. Your company could ask a Scout troop to join you. See http://www.betiresmart.ca/ for more details. ***For each car owner who commits to checking tire pressure on a monthly basis, count 0.125 tonne toward your reduction goal.*** Give car owners a reminder note about their commitment.
- Organize a community car wash with a Scout troop. Discuss with Scouts how an automated car wash uses energy (i.e. to pump water through sprayer jets, operate scrubbers, warm water and heat dry the car). Compare this to using human power to wash a car – what is the difference in energy use? What about greenhouse gas emissions? On the day of the car wash, make sure you have a sign that indicates that the car wash is organized with the purpose of reducing energy use and climate change. Prepare Scouts to explain to car wash visitors that the troop wants to help the community save energy and reduce GHGs that lead to climate change. Present each car with a flyer describing how they've helped to combat climate change by not using an automated car wash. Provide additional tips on how they can maintain their car to improve performance, energy efficiency and reduce GHGs. Information on maintenance tips can be found at: http://www.oee.nrcan.gc.ca/vehicles/tips/tips_maintenance.cfm?PrintView=N&Text=N. ***Each car owner who makes a commitment to regular car maintenance as a result of your efforts will earn you 0.3 tonnes toward your reduction goal.*** Be sure to give car owners a reminder note about their commitment.

- Organize and lead a Scoutrees project with a Scout troop or Cub pack. Teach them about the link between climate change and trees. An excellent resource is found at: http://www.tcf-fca.ca/publications/pdf/english_reduceco2.pdf. Calculate how many GHGs your project will remove from the atmosphere: ***# trees planted ÷ 360 = estimated tonnes of carbon dioxide removed each year. Count this toward your emission reduction goal.***
- With your company, offer a home energy audit service to neighbourhoods in your community. Create a check list of issues to address from the on-line calculator provided in the link under step #1. Be prepared to provide feedback and suggestions to home owners about how they could reduce the amount of energy their home uses. If you want to use this activity to earn GHG emission reductions toward your goal, create a commitment card for homeowners with different actions they could commit to that would reduce their emissions and save energy. Use the on-line calculator you used in step #1 to report back to the owner how many GHGs they could reduce and their estimated energy savings. ***These GHGs savings could be included toward your reduction goal, if the homeowner commits to implementing them.***

3. **Carry out one education activity to help yourself and/or others learn more about climate change.** If you undertake the activity on your own, make a short presentation about what you found to your company. Some ideas include:

► ***Improving transportation***

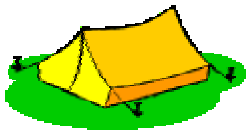
- Learn how to properly maintain your bike and pass on your knowledge to others, such as a Scout troop. Much like a car, a properly maintained bike requires less energy to ride, and encourages you to ride it more often. Hold a bike repair clinic with your company, or for a local Scout troop. Shortly after the clinic, play some biking related games or organize a day long or overnight bike trip. Resources for bike maintenance: members.aol.com/biketune/repairindex.htm; www.parktool.com/repair_help/FAQindex.shtml. An excellent, growing resource for biking related games is: http://www.best.bc.ca/programsAndServices/hundredandone.htm.
- New cars are coming out with better designs that have a much lower impact on air pollution and climate change. Learn about new cars and what makes them function optimally. Visit car dealers and research which cars are the most energy efficient and have the lowest greenhouse gas emissions, and why. One place to start your research is: http://www.fueleconomy.gov/feg/sbs.htm. Learn about the types of car maintenance required to optimize the performance of your favourite car.

► ***Learning about renewable energy***

- Attend a Cub camp and help them build simple solar cookers. Explain how the cookers work. Plan and cook a snack or meal on solar cookers for the entire camp. See http://www.re-energy.ca/t-i_solarheatbuild-2.shtml for plans on how to make a cool solar oven, or find your own model to follow.
- Introduce a local Scout troop to the concept of renewable energy – What is it? How does it work? What is its potential? What are the drawbacks? Select and build a model of a renewable energy source with the Scout troop. Some models you could use are found on: http://www.re-energy.ca/t_renewablebasics.shtml or do your own research into models to build.

► ***Learning about climate change impacts***

- Research the possible climate change impacts your province or area could face. The following site is a good place to start: http://www.climatechange.gc.ca/english/issues/how_will/regional.shtml

  Make educated assumptions about how these potential impacts could affect the camping conditions in two of your favourite camping areas. Prepare a camping readiness guide for Scouts on how they should prepare themselves under these future climate scenarios if camping/canoeing in these locations. What should they watch for? What pre-trip checks should they make? What should they avoid doing? If choosing a provincial or national park as one of your locations, be sure to contact park staff for their ideas as well. Help a Scout group to understand what changes they can expect and how they should prepare themselves.
- Create a “Climate Change Time Capsule”. Learn about how climate change might affect the environment or habitat of one of your favourite camping or canoeing spots (again, use http://www.climatechange.gc.ca/english/issues/how_will/regional.shtml as a starting point). Record what the area looks and feels like right now by writing, taking pictures, recording sounds, or making drawings. Predict what might happen in 50 years time to this camping spot using your climate change knowledge. Seal all this information in a container and store with Scouts Canada, to be opened by Scouts or Venturers in the future.

► ***Linking food and climate change***

- Food and climate change? Yes, there really is a link. The average meal has travelled approximately 2,500 kilometres to reach your plate. Plus, food today uses about 20 times more energy to produce than it did at the beginning of the 20th Century. Learn more about the energy used to produce and obtain our food. What actions could you take to reduce the amount of GHGs you produce through grocery shopping? Some places to help you start your research are:

http://www.climatechangesolutions.com/individuals/lifestyle/stories/spud.shtml?o=lifestyle&r=stories ; http://www.davidsuzuki.org/WOL/Challenge/10steps.asp.

- Plan a "GHG minimal" menu for your next canoe or hiking trip. Determine what food is in season, produced locally, and generally reduces energy demands. What were the challenges? What did you learn in the process?

CONGRATULATIONS!
YOU HAVE COMPLETED THE VENTURER CLIMATE CHANGE CREST REQUIREMENTS!

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