

# **The Tides of Change: Climate Change in Canada**

## **Abstract**

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### **Statement of Significance**

This unit has two different outcomes. Throughout the unit, students will be learning about Climate Change and how it impacts them locally and nationally. As they learn about Climate Change, they will also be developing their research skills; digging deeper on the internet and accessing information in the “Deep Web”<sup>1</sup> combining that with information from other sources.

Climate Change is something that students hear about from a variety of sources. However, much of the information is national and global in scope, which can be too far removed from their lives for it to be relevant. Looking at concrete examples of Climate Change in Atlantic and Northern Canada, and doing their own research, rather than just being given the facts will allow students an opportunity to connect with the issue in a more personal way.

As new technology, like the internet, is integrated into our classrooms, students and teachers need to adjust their teaching methods to incorporate it in relevant and appropriate ways. The internet has the potential to help student’s access topical information from many new sources. But it can also lead students to inaccurate or out-of date information, information overload, and plagiarism. Assignments in which students synthesize information from different sources, combine the information in a variety new of ways, and ensuring that students know how to use advanced search techniques can help avoid these pitfalls. While students are often directed to do research on the internet little time is spent giving them the tools they need to research effectively.

### **Questions for the Study**

During this unit we will be looking at Climate Change and the effect that it has from a local and national perspective. By starting the unit

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<sup>1</sup> Getting in Deep: Finding the Deep Web When You Need It by Jamie McKenzie

discussing the Northwest Passage and its role in Canadian history, the possibility of a trade route being developed up there is given historical as well as environmental and economic significance. Providing students with websites developed by local and indigenous people and organizations in addition to government sites provides a more balanced picture as well as providing an opportunity to combat negative stereotypes.

Ending the unit with a debate allows students the opportunity to present and defend their findings and conclusions while working collectively with classmates in a friendly competition. The format of the debate will vary depending on the amount of time available, the amount of experience students have in debating, and how well they work as a group.

## **Methodology**

The unit is introduced with a discussion about the Northwest Passage, recapping what students know about it and the role that it played in Canadian history. Then, students read a recent Maclean's article which states that the effects of Climate Change might soon make it viable to open up trade routes in the Arctic. After reading the article (or during the reading if that is appropriate for the particular group) students break into small groups to discuss the pros and cons of these new potential trade routes before sharing their some of the points they discussed with the whole class.

In the next part of the unit students select one of the three proposed trade routes and research the potential impacts (positive and negative) on the environment and indigenous populations. Mini lessons will be given on research techniques as appropriate, with the intention of teaching students to use more sophisticated research techniques than a simple Google search. Good research habits will be encouraged by having students keep track of their findings using a graphic organizer, and keep track of their sources; these will make up part of their assessment for the unit.

Mini lessons will be taught on using graphic organizers and making bibliographies. In the final part of the unit, one of the trade routes will be selected (or the Northwest Passage can be used to keep the focus in Canada) and students will debate whether or not the trade route should be developed.

Although students will spend much of their time in the computer lab, they will also have access to print materials and other resources. These include but aren't limited to newspaper clippings, magazines, the

Government of Canada Climate Change poster series and Teacher's Guide available from <http://adaptation.nrcan.gc.ca/posters>, One Tonne Challenge posters and brochures available from <http://www.climatechange.gc.ca/onetonne/english>, and the publication *Climate, Nature, People: Indicators of Canada's Changing Climate*, published by the Canadian Council of Ministers of the Environment.

This unit can be modified for students with different abilities by adding to or modifying the assignments. It could also change from an independent study to buddy-study where students research, organize and analyze information together but complete individual projects. Learning contracts could be completed by all students, or those who had modified expectations. If students were working in groups, learning contracts could be arranged individually or with each group outlining clear deliverables for each team member.

## **Conclusions**

Researching subjects as complex as Climate Change can easily overwhelm students whose internet literacy doesn't extend beyond Internet Messenger, email and searching with Google. If we don't find a way for students to make a connection with all of the information and statistics that they have access to about Climate Change and Global Warming, it becomes information overload. Placing the information in a local and global perspective provides one way for them to make those connections. Providing students with the tools to find the information that they need, when they need it, no matter what they are researching prepares them to take their place in as fluent and engaged participants in the information age.

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