The Arctic Then and Now:  
A Comparison Poster Using Technology

Lesson Overview:

In recognition of the International Polar Year (IPY), 2007-09, this lesson will look at how technology has changed life in the Polar Regions. The objective of this lesson is to help geography and social studies teachers and students learn about life in Northern Canada. More specifically students will gain an understanding of the place and region, the physical and human systems, and the environment and society through the change in technology.

Students will construct a poster on an 11"X17" sheet of paper or Bristol board that will show a significant change in the use of technology in one of the following areas: Communication, Transportation, Medicine, Industry, Science, Entertainment, or Sports as it relates to life in the Polar Regions. Students will look at how technology has changed and as a result how it has affected and changed the life of the people of Northern Canada

Grade Level:  
Grades 6 to 8

Time Required: Two 60 minute classes plus extension lessons if desired

Curriculum Connection:

Atlantic Province Education Foundation Curriculum for Social Studies  
General Curriculum Outcomes  
People, Places and Environment General Curriculum Outcome:  
Students will be expected to demonstrate an understanding of the interactions among people, places and the environment.

Interdependence General Curriculum Outcome:  
Students will be expected to demonstrate an understanding of the interdependent relationship among individuals, societies, and the environment - locally, nationally, and globally - and the implications for a sustainable future.

Prince Edward Island:  
Grade 8 Social Studies Outcomes  
Unit 3: Decades of Change  
8.3.5 Analyze the impact of changing technology and socio-economic conditions on Canada's prosperity and lifestyles  
8.3.6 Compare the cultural and social trends in Canada in the 1950’s, 1960’s and 1970’s
Links to Canadian National Standards for Geography:

**Essential Element #2: Places and Regions**
- Physical and human characteristics of places and regions in Canada and the world

**Essential Element #4: Human Systems**
- Patterns of culture in Canada and the world (e.g. religion, languages, ethnicity, economy)
- Types and patterns of economic activity (primary, secondary, tertiary, quaternary)

**Essential Element #5: Environment and Society**
- Effects of human modification of the physical environment (e.g. global warming, deforestation, desertification, urbanization)

**Geographic Skill #2: Acquiring Geographic Information**
- Use a variety of research skills to locate and collect geographic data

**Geographic Skill #3: Organizing Geographic Information**
- Integrate various types of materials to organize geographic information

**Geographic Skill #4: Analyzing Geographic Information**
- Interpret and synthesize information obtained from a variety of sources – graphs, charts, tables, diagrams, texts, photographs and documents

**Link to the Canadian Atlas Online (CAOL)**
www.canadiangeographic.ca/atlas

**Additional Resources, Materials, and Equipment Required:**

Blank map of Northern Canada (see end of lesson)
Students will need access to computers, library, magazines, etc.

Poster materials: 11X17 paper, scissors, glue stick, ruler.

**Main Objective:**

Students will look at how technology has changed and as a result how it has affected and changed the life of the people of Northern Canada. Students will be able to understand the impact of changing technology and socio-economic conditions on prosperity and lifestyles for people of Northern Canada. They will see the effects of human modification of the physical environment and human landscapes.
Learning Outcomes: By the end of the lesson, students will be able to:

- Demonstrate an understanding of the interactions among people, places and the environment.
- Analyse the impact of changing technology and socio-economic conditions on Canada’s prosperity and lifestyles.
- Demonstrate an understanding of the physical and human characteristics of places and regions in Canada and the world.
- Demonstrate an understanding of the types and patterns of economic activity (primary, secondary, tertiary, quaternary).
- Demonstrate an understanding of the effects of human modification of the physical environment (e.g. global warming, deforestation, desertification, urbanization).
- Use a variety of research skills to locate and collect geographic data.
- Use maps to collect and/or compile geographic information.
- Integrate various types of materials to organize geographic information.
- Interpret and synthesize information obtained from a variety of sources – graphs, charts, tables, diagrams, texts, photographs and documents.

The Lesson:

<table>
<thead>
<tr>
<th>Teacher Activity</th>
<th>Student Activity</th>
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<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td></td>
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<tr>
<td>Display a map or picture of the Polar Regions of Canada.</td>
<td>Offer up answers to the teacher’s questions</td>
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<tr>
<td>Discuss changes in technology over the last 100 years.</td>
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<tr>
<td>Show the students an example of how technology has changed and its impact on life in the Polar Region.</td>
<td>Look at the example.</td>
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</tbody>
</table>
Pass out map blanks of Northern Canada.

Ask students to locate and label the following places: Nunavut, Yukon, Northwest Territories, Quebec, Labrador, Ellesmere Island, Baffin Island, Prince of Wales Island, Whitehorse, Yellowknife, Iqaluit, Resolute, Rankin Inlet, Artic Ocean, Hudson Bay, Baffin Bay, Davis Strait.

Each student will create a “poster” (11X17 paper) to show a significant change in one of the areas of technology in the list provided:
- Communication
- Transportation
- Medicine
- Industry
- Science
- Entertainment
- Sports

The poster must include the following: border, title, 2 illustrations (then /now), and text to support the illustrations.

Explain how the change in technology has improved the way of life of people of Northern Canada and the downside to the technology (think of way of life as well as the environment and creatures of the North).

Check to see that they have included the following: border, title, two illustrations **(Then /Now)**, and text to support the illustrations.

<table>
<thead>
<tr>
<th>Lesson Development</th>
<th>Conclusion</th>
</tr>
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<tbody>
<tr>
<td>Use an atlas or go to the web site listed below and label their maps, being sure to include a title. <a href="http://www.canadiangeographic.ca/atlas/">www.canadiangeographic.ca/atlas/</a></td>
<td>Display student work and discuss various areas of technologies through a teacher-led discussion.</td>
</tr>
<tr>
<td>Choose an area from the list to research. Conduct research, find two images** and complete a paragraph write-up for each image discussing the technology chosen <strong>Then</strong> as compared to <strong>Now</strong>. ——Paste the images and information on the 11X17 paper.</td>
<td>Interact with the teacher-led discussion.</td>
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<tr>
<td><strong>Students may use pictures from magazines, the internet, or draw their own.</strong></td>
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<tr>
<td>Students pass in the poster assignment for discussion and assessment.</td>
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Lesson Extension:
Students could do one of the following:

- Create a scrap/art book of 4 to 8 drawings, images or pictures that show technologies used in the Polar Regions over the last century.
- Write an essay comparing how technology has changed any aspect cultural or way of life in the Polar Region of Canada.
- Explore the following website and investigate issues dealing with the Polar Regions of Canada. [www.polarcom.gc.ca](http://www.polarcom.gc.ca)
- Use computers to do a Google search on "International Polar Year" looking for information on Global Warming. From this information write a statement about global warming. Then have the students research one technology that adds/creates more to global warming and one technology that helps to solve global warming. [www.polarcom.gc.ca](http://www.polarcom.gc.ca)
Assessment of Student Learning:

*Rubric for poster Activity*

<table>
<thead>
<tr>
<th>Category</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attractiveness &amp; Organization</strong></td>
<td>The page has exceptionally attractive formatting and well-organized information.</td>
<td>The page has attractive formatting and well-organized information.</td>
<td>The page has well-organized information.</td>
<td>The page’s formatting and organization of material are confusing to the reader.</td>
</tr>
<tr>
<td><strong>Graphics / Pictures</strong></td>
<td>Both graphics go well with the theme. Both are excellent.</td>
<td>One graphic goes well with the theme, but the other graphic could be better.</td>
<td>Neither graphic appears to go well with the theme and they both need work.</td>
<td>One graphic needs work and the other graphic does not fit the theme and appears to be randomly chosen.</td>
</tr>
<tr>
<td><strong>Content - Accuracy</strong></td>
<td>All the facts about the poster are accurate.</td>
<td>99-90% of the facts about the poster are accurate.</td>
<td>89-80% of the facts about the poster are accurate.</td>
<td>Fewer than 80% of the facts about the poster are accurate.</td>
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**Further Reading**

Useful Websites:
- [www.polarcom.gc.ca](http://www.polarcom.gc.ca)
- [http://www.canadiangeographic.ca/atlas/](http://www.canadiangeographic.ca/atlas/)
- [http://www.hickerphoto.com/arctic-photos.htm](http://www.hickerphoto.com/arctic-photos.htm)
- [http://www.arcticcircle.ca/](http://www.arcticcircle.ca/)
- [http://www.arcticphoto.co.uk/stock5.htm](http://www.arcticphoto.co.uk/stock5.htm)
- [http://www.thedieselgypsy.com/Ice%20Roads-3B-Denison.htm](http://www.thedieselgypsy.com/Ice%20Roads-3B-Denison.htm)
Example for teachers

Communication – Side by side talking in the post vs. the cell phone now

<table>
<thead>
<tr>
<th>THEN</th>
<th>NOW</th>
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<tbody>
<tr>
<td>For centuries, people have relied on being close enough to others to communicate (talk) with them. It has been an opportunity for families and groups to gather and to share events. Talking is still used today, however it is no longer necessary to be in the same location to talk. Talking has allowed stories to be passed down through the ages and has provided a great deal of information about people, places and events from the past.</td>
<td>Since the 1990’s, cell phones have been growing in popularity and use. Many people, businesses, and institutions rely on cell phones for communication. You can talk to anyone around the world in seconds! Sadly, instant communication has lessened the opportunity for many to spend time with others and for deep meaningful discussions to occur.</td>
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