

Taking the Chill Off: Climate Change in the Yukon & Northwest Territories

The Causes of Climate Change

Name: _____

Date: _____

Group Members: _____

What is the Greenhouse Effect?

1. Name two of the gases that absorb heat energy in the atmosphere.

2. What can you conclude about CO₂ concentrations over the last 200 years from studying the graph?

3. What happens to the greenhouse effect as concentrations of greenhouse gases increase from burning fossil fuels?

| <u>Connections</u> | <u>Reflections</u> | <u>Questions</u> |
|--|---|--|
| <p><i>What connections can you make among what you've learned, your lifestyle, your family, school, community, or other regions.</i></p> | <p><i>Reflect on your learning, understandings, and discoveries. "Write about one thing you did not know before starting this activity"</i></p> | <p>What questions do you still have, or what new questions have been raised?</p> |

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The Consequences of Climate Change

Name: _____

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Permafrost and Climate Change:

1. What might happen to the permafrost if climate warms?

2. What can you conclude is happening from the Summer Thaw Depth graph?

3. How will people be affected by thawing permafrost?

A Greener North:

4. What will happen to the treeline with climate change?

5. What may happen to insect distribution as climate warms?

6. What new types of vegetative cover will be found in the Yukon and Northwest Territories as climate warms?

A Tougher Life for Caribou?

7. What insect might increasingly harass caribou with warmer temperatures?

8. What would it become difficult for caribou to give birth and raise their young if climate warms?

9. How might caribou changes have an impact on the people in the region?

Fire and Ice:

10. How will the risks of forest fires change in the north with expected climate changes?

11. List three effects of excessive thawing of ice.

Impacts of Climate Change in the Beaufort Sea Region

12. How much erosion could occur in a single year in the Beaufort Sea region?

13. How may climate warming affect this region?

14. What is a consequence of climate warming?

Sea Ice and Marine Mammals:

6. What has been happening to the ice concentration in the area over time, comparing the 30-Year Median graph to that of September 1998?

7. Why do seals suffer when ice melts quicker than usual?

Rivers and Lakes

8. Northern communities rely on ice roads for transportation. How will this change as the climate warms?

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Action on Climate Change

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Impacts of Climate Change in the Beaufort Sea Region

1. Examine the air photo taken of Tuktoyaktuk from 1947. The green and black lines show the significant loss of shoreline over the last 50+ years. What has been proposed, and somewhat implemented since 1976?

How Are the N.W.T. and Yukon Responding to Climate Change?

2. What are some other energy sources to replace diesel fuel generators?

| <u><i>What I am already doing...</i></u> | <u><i>What I can begin to do...</i></u> |
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