Climate Change Scavenger Hunt



Grades: Middle school (Grades 7-8, Ages 12-14)

Time: 45 – 60 minutes Venue: Outdoors

Overview:

- Using a climate change primer (Appendix B), have a brief introduction to basic climate change and environment concepts.
- Send students in groups on a scavenger hunt to learn about their surroundings, and work on skills like team work, leadership, and discussion.

Estimated Timeline:

- 10 15 minutes for background and activity explanation
- 30 45 minutes for scavenger hunt
- 10 15 minutes for discussion and sharing findings

Venue:

- An open, outdoor space, such as a park. We used Sylvia Grinnell Territorial Park.
- Season: Summer (e.g., June or August)

Materials needed:

- Printout of the scavenger hunt lists (Appendix A attached)
- Large sheets of paper, 2 per group
- 2 blindfolds or scarves
- 2 large puzzles (with approximately 12 pieces)
- Roll of thick string or cord (or about 10 pieces, each 30cm long)
- Scissors
- Knot printout (Appendix C attached)
- Pencils for each group
- Clipboards for each group (optional)

Notes:

- This activity worked well late in the school year, when the weather was warm and plants were growing. It is possible to adapt the scavenger hunt to different seasons.
- Have a teacher or supervisor at each of the three stations and/or floating between the stations.
- The time needed for teams to complete the scavenger hunt can vary; 30-45 minutes works well.



The Activity

Explain:

Today we will be doing a scavenger hunt in the park to learn more about our environment, and have some fun.

We will be splitting you into **teams of 3-4**. Each team will be given a task sheet of things to do or find, but **each team has a different list**.

There are 3 stations that every team will go to. There will be a teacher/supervisor at each station to give instructions and check that you have completed the task.
1. At the ______ [number or location] station, you will have to put together a puzzle. One team member will be blindfolded while the rest of the team has to guide the puzzle-maker by giving directions.
2. At the ______ [number or location] station, each team member will have to tie a knot. The instruction sheets are there to help you.
3. At the ______ [number or location] station, each group will have to make a paper airplane and try to fly it the furthest. Mark where it lands with an object to compare teams.

When you are done all of the items on the list, please come back to the pavilion. Then we'll go over what each team found. You have 30 minutes to complete the scavenger hunt. Go!

Breakdown:

- 1. Split everyone into groups.
- 2. Tell each group where to start (number 1, 3, 5, 7, 9) on the sheet, so each group starts on a different station or activity.
- 3. Go over the rules, listed below.
- 4. Start the scavenger hunt
- 5. End by calling all the students back to the starting point and discussing the activity.

RULES

- Remember to read the instructions on the sheet.
- Your group has to stay together no splitting up.
- You can't use the same item twice.
- Be creative!
- You have 30 minutes.

Discussion

Questions:

- Who was able to finish the scavenger hunt?
- Review the questions that were common for all of the groups.
- Who has an interesting or unique answer to a scavenger hunt question? Have the groups demonstrate some of their answers.
- What did you learn about working with your team?

Appendix A

Scavenger Hunt Sheets

There are six Scavenger Hunt lists attached. Distribute one to each team. Depending on class size, you might not need all of the lists.

These activity lists are based on the scavenger hunt that was completed at Sylvia Grinnell Park in Iqaluit. If you are not in Iqaluit, use other landmarks in the area (e.g., a river, a bay, a hill). You may also wish to choose a central meeting place.

For more information or for additional ideas, contact: climatechange@gov.nu.ca

- 1. Come up with a team name and a team cheer.
- 2. Find something that has more than 5 sides
- 3. Build a paper airplane at the pavilion
- 4. Get a thingamajig that will hold 3 or 4 things together
- 5. Find something that is re-useable
- 6. Get something that is long and white
- 7. Draw a diagram of the greenhouse effect
- 8. Have all your team members do the bowline knot.
- 9. Write down the Inuktitut name for <u>Sylvia Grinnell River</u> (think about where it might be written down?)
- 10. Which one of the following is a climate change adaptation measure?
 - a. Updating traditional hunting routes to reflect changes to sea ice thickness
 - b. Carpooling
 - c. Using energy efficient light bulbs
 - d. Replacing appliances to high efficiency models
- 11. Complete the puzzle
- 12. Find something that reflects sunlight

- 1. Come up with a team name and a team cheer.
- 2. Complete the puzzle
- 3. Find something square
- 4. Draw a diagram of the greenhouse effect
- 5. Build a paper airplane at the <u>pavilion</u>
- 6. Write down the Inuktitut name for <u>Sylvia Grinnell River</u> (think about where it might be written down?)
- 7. All team members have to make a bowline knot
- 8. Which one of the following is a climate change adaptation measure?
 - a. Updating traditional hunting routes to reflect changes to sea ice thickness
 - b. Carpooling
 - c. Using energy efficient light bulbs
 - d. Replacing appliances to high efficiency models
- 9. Get something that is fun to play with
- 10. Get something that looks delicious
- 11. Which freezes quicker, fresh water or salt water?
- 12. Find something that releases oxygen

- 1. Come up with a team name and a team cheer.
- 2. Build a paper airplane at the pavilion
- 3. Write down the Inuktitut name for <u>Sylvia Grinnell River</u> (think about where it might be written down?
- 4. Complete the puzzle
- 5. Which one of the following is a climate change adaptation measure?
 - a. Updating traditional hunting routes to reflect changes to sea ice thickness
 - b. Carpooling
 - c. Using energy efficient light bulbs
 - d. Replacing appliances to high efficiency model
- 6. Get something that is bouncy
- 7. All team members have to do a bowline knot
- 8. Draw a diagram of the greenhouse effect
- 9. Inuit elders have always said the environment, the living and non-living things, and the people are all connected together, what is the English word for this?
- 10. Sing a song that has a combination of 2 languages
- 11. Find a natural resource you depend on
- 12. Find out what Qaummaarviit means, this relates to Qaummaarviit Territorial Park.

- 1. Come up with a team name and a team cheer.
- 2. Find something that is round
- 3. All team members have to do a bowline knot
- 4. Complete the puzzle
- 5. Get a thingamajig that will require 2 people to work together
- 6. Build a paper airplane at the pavilion
- 7. Draw a diagram of the greenhouse effect
- 8. Get something that could be used to keep your fingers busy for a while
- 9. Write down the Inuktitut name for <u>Sylvia Grinnell River</u> (think about where it might be written down?)
- 10. Find something that is hard to look at
- 11. Find something that reflects sunlight
- 12. Which one of the following is a climate change adaptation measure?
 - a. Updating traditional hunting routes to reflect changes to sea ice thickness
 - b. Carpooling
 - c. Using energy efficient light bulbs
 - d. Replacing appliances to high efficiency models

- 1. Come up with a team name and a team cheer.
- 2. Get something that is long and skinny
- 3. Complete the puzzle
- 4. Write down the Inuktitut name for <u>Sylvia Grinnell River</u> (think about where it might be written down?)
- 5. Get something that will connect 3 or 4 things
- 6. Build a paper airplane at the pavilion
- 7. Name a plant that you might see at Sylvia Grinnell Park
- 8. Find something that is round
- 9. Which one of the following is a climate change adaptation measure?
 - Updating traditional hunting routes to reflect changes to sea ice thickness
 - b. Carpooling
 - c. Using energy efficient light bulbs
 - d. Replacing appliances to high efficiency models
- 10. Get something that could be used to keep your fingers busy for a while
- 11. Draw a diagram of the greenhouse effect
- 12. Find something that releases oxygen

- 1) Come up with a team name and a team cheer.
- 2) Find something that is re-useable
- 3) Find an edible plant.
- 4) Complete the puzzle
- 5) Sing a song that has a combination of 2 languages
- 6) Build a paper airplane at the pavilion
- 7) Get a thingamajig that will require 2 people to work together
- 8) Which one of the following is a climate change adaptation measure?
 - Updating traditional hunting routes to reflect changes to sea ice thickness
 - b. Carpooling
 - c. Using energy efficient light bulbs
 - d. Replacing appliances to high efficiency models
- 9) Draw a diagram of the greenhouse effect
- 10) Get something that looks delicious
- 11) Find something that is triangular
- 12) Which freezes quicker, fresh water or salt water?

Climate Change Primer

The Greenhouse Effect

What happens when a car is sitting in the sun? It will get hot inside. This is like a greenhouse. What do you know about greenhouses and how they work?

The greenhouse is a great example of how the **greenhouse effect** works. The sun's rays enter the greenhouse through the clear glass. Most of the sun's energy is trapped in the greenhouse. This makes the greenhouse warmer than the air outside, so plants can grow. Some heat does escape through the glass, but most of it is trapped.

Similarly, the **earth's atmosphere** works like a greenhouse. Can someone explain how the greenhouse effect on earth?

- 1) The sun's rays reach the earth sunlight passes through the earth's atmosphere and warms the earth.
- 2) Some sunlight (solar radiation) is reflected by the earth and the atmosphere
- 3) Most of the sun's energy (radiation) is absorbed by the Earth's surface.
- 4) Next, some of the energy will pass back through the atmosphere, into space.
- 5) But, the atmosphere also traps some of the heat, which helps to keep the earth warm (warm enough for life on Earth).

What happens when more heat is trapped around the Earth?

→ The overall surface temperature of the Earth increases.

Greenhouse Gases

The greenhouse effect on earth is caused by the atmosphere and **greenhouse gases**. Greenhouse gases are things like carbon dioxide or CO2, or methane. We need some greenhouse gases to keep the earth warm enough to live on, but if there are too many greenhouse gases in the atmosphere, we will start to see climate change.

What are some sources of greenhouse gases?

There are natural and human sources:

- Natural → forest fires, volcanoes, cows (produce methane)
- Human → using fossil fuels driving a car, taking an airplane, charging your phone, deforestation

Climate Change Impacts

How will climate change affect you? Think about:

- Hunting seasons
- Changing ice conditions
- Increased shipping season
- Different plants and animals in the area seeing plants that normally don't grow here

Adaptation

What are some things that we can do to adapt to the changing environment? What can we do in our everyday lives to live with the changes from climate change?

- Building communities to handle permafrost thaw
- Hunters to find safer, alternate hunting routes
- Being prepared for quick changes in the weather, especially when out on the land
- New building techniques and building stable structures

Mitigation

What are some things that we can do to reduce the amount of greenhouse gases that go into the environment?

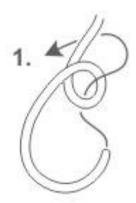
- Use less fossil fuels
- Drive less
- Idle less
- Use alternative energy sources, like solar power
- Using energy efficient light bulbs

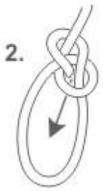
BOWLINE

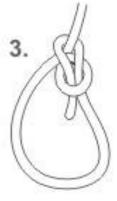
One of the most useful knots you can know. The bowline forms a secure loop that will not jam and is easy to tie and untie.

Form an eye in the rope with the standing part of the rope running underneath. Run the free end up through the eye making a loop below the eye.

Take a turn around the standing part and feed the free end back down into the eye and hold there. Pull standing part to tighten down the knot.







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