



SAPUTTIAPIK AND SAPUTTIALUIT: HAVE THESE ANCESTRAL HUNTING TERRITORIES UNDERGONE CHANGES OVER TIME?

Time:

180 minutes

Developed by:

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Overview

During this lesson, students will apply a variety of skills related to geography, biology, language and culture to learn about two seal-hunting grounds in the region of Inukjuak and the impact of climate change on those grounds and traditional Inuit hunting techniques. Students will study the interconnectedness of humans, Earth, animals, water, ice and atmosphere. Students will be able to answer the following questions at the end of the lesson: Have the ecosystems that make up the Saputtiafik and Saputtialuit territories undergone many changes over time? What is the importance of sea ice to Indigenous communities? How do western science and Indigenous knowledge both contribute to the understanding of the effects of climate change?

Subject/topic :

Climate change

Grades:

9 – 12

Learning Goals

- Locate a specific place on a map.
- Create a proposal for a study.
- Select what data, observations, and supplies are needed to carry out a study.
- Demonstrate an understanding of the importance of Indigenous perspectives.

Lesson implementation

Introduction

As a warm-up before inviting students onto the Giant Floor Map, have them locate different communities along the Hudson Bay coastline to gain a sense of the distribution of these communities in relation to physical landforms such as lakes, oceans, mountains and rivers. This can be done using atlases, maps, or Google Earth. While identifying these communities, students can take note of things like population size, name, proximity to the coast, etc. Show students the Treeline Map card and ask them what they think the boundary is indicating. Explain that the treeline marks the boundary beyond which trees experience difficulty growing due to the environmental conditions experienced above this latitude (e.g., cold temperatures and low moisture availability).

After the students have become familiar with the locations of different communities around the Hudson Bay area, have them explore the Giant Floor Map in small groups, using their newly acquired knowledge to determine where those communities would be located on the Giant Floor Map. (Note: this map lacks provincial and territorial boundaries, roads, etc., thus students will have to use their sense of scale and their understanding of geography and topography to orient themselves.) Have students mark the treeline on the map using the provided chains.

Ask students to stand on a body of water above the treeline that they think freezes over during the winter months. Ask them to describe which animals would likely be hunted by people in those areas (e.g., beluga whale, ringed seal, walrus, and Arctic char) and what techniques and tools would be used in the hunt (e.g., a snowmobile). Have students sit in a circle around the Saputtiafik and Saputtialuit regions and show them the Map of Saputtiafik and Saputtialuit card so that they understand where the boundaries are. *(Alternatively, if available, invite Elders or knowledge keepers to share stories about these regions to help students visualize the boundaries.)*

Saputtiafik geographic coordinates: 58° 37' 23.64" N, 78° 22' 18.59" W

Saputtialuit geographic coordinates: 58° 41' 33.28" N, 78° 21' 17.31" W

Development

While gathered on the Giant Floor Map, explain that space-based Earth observations (such as satellite images) can help us see Earth from a different perspective. Place the RADARSAT images out on display so that students can take a look. Tell students that satellites capture images similar to these (these ones have had a false colour mask put on to make it easy to distinguish land from water) and it is up to experts to interpret these images and make sense of them.



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- Interpret satellite images of the same place over time.
- Explore the relationship between the Inuit and the land and ice.
- Understand how climate change is affecting Inuit hunting and ways of life in the North.
- Learn the names of different animals and geographical and hunting terms in Inuktitut.

Materials Needed

- Giant Floor Map
- Treeline Map card
- Map of Saputtiafik and Saputtialuit card
- One copy of the Study Proposal sheet per student
- Climate Change: Impacts on Inuit Hunting and Fishing card
- RADARSAT image cards
- Inuktitut Vocabulary card
- Chains
- Pylons

Optional:

- All the necessary equipment for an excursion

Connection to the Canadian Geography Framework

Concepts of Geographic Thinking

- Patterns and trends
- Interrelationships
- Spatial significance
- Geographic perspective

Inquiry Process

- Ask geographic questions
- Interpret and analyze
- Evaluate and draw conclusions
- Communicate
- Reflect and respond

Have students act as interpreters and examine the images while paying close attention to the dates on the images. What deductions can students make about the colours, shapes, darker areas, and lines they see? What do they notice about month-to-month and year-to-year differences across the images? Have them brainstorm reasons for what might be causing these differences and invite them to share their ideas with the class.

Next, read the Climate Change: Impacts on Inuit Hunting and Fishing card out loud. Get students to revisit the images and, based on what they have learned about the Inuit experience with climate change, determine if any of their interpretations have changed. Using the Inuktitut Vocabulary card, have students translate key words into Inuktitut.

Have a discussion about the importance of incorporating data and observations from numerous sources, for example, from government agencies and Indigenous communities in a particular region. If satellite images need thorough interpretation, what role does the human relationship with the land, snow, and ice play in that interpretation? For example, how could an Indigenous person's knowledge about the cycle of sea ice, paired with satellite imagery, contribute to an overall understanding of how climate change is affecting the Arctic? Ask students their thoughts on how western science and Indigenous knowledge are complementary when it comes to studying environmental change.

Ask students to consider all that they have learned about the impact of climate change in this area and the effect on Inuit communities. Get students to think about a subject that they would like to know more about. For example, animal populations or migrations, Inuit hunting or fishing techniques, sea ice depth, Inuit communities, etc. Have students complete the Study Proposal sheet with their hypothetical study. The idea is to get students thinking about issues affecting Inuit communities, the connection to climate change, and considerations needed when developing a study. Students should consider what they would need to observe for their hypothetical study, what data they would need, how they could collect that data, how they could incorporate Indigenous perspectives into their research, as well as how they could carry out their study. Explain that when collecting observations and experiences first-hand from communities, it is important to respect the language and culture of that community. Communicating in the local language shows respect and dedication to preserving a culture. Students can reference the Inuktitut Vocabulary card for terms they might be using.

Conclusion

Have students present their proposals to a partner or a small group. Encourage students to share feedback with one another and adapt their proposals using that feedback.



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Geospatial Skills

- Foundational elements
- Spatial representation
- Technology
- Fieldwork

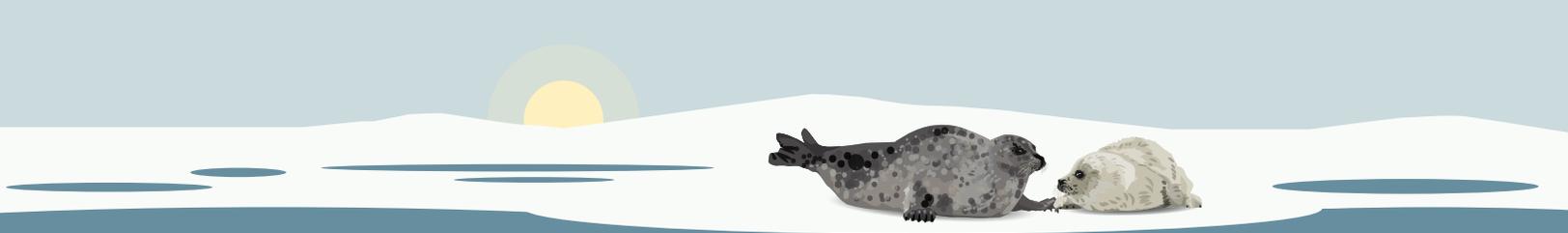
Discuss the lessons learned in the activity with students. Through group discussion, evaluate student understanding of climate change and the related impacts on the Inuit way of life in the North. Be sure to discuss the importance of traditional and modern ways of life and the strength and vibrancy of the Inuit culture. Using the Giant Floor Map, the chains, and the pylons, have students break into new groups and share with their classmates something new they have learned about the geography, history and culture of the North and the traditional hunting areas of Saputtiapik and Saputtialuit.

Extend your geographical thinking

1. **The traditional names of places and communities must be protected because they are an important aspect of the Inuit culture.** Have students study the traditional and colonial names of different places in the Hudson Bay area (or elsewhere) and research the reasons why the traditional names were initially given and why they were changed by European settlers. It is important for students to know that Indigenous Peoples named many places in present-day Canada. Before the arrival of Europeans, Indigenous Peoples gave names to the land to identify places of importance with which they had strong spiritual connections.
2. Using their knowledge about the hunting grounds of the Inuit, have students create an imagined territory, complete with animals and plants. Ask them to come up with a name that has a special meaning to them and that they would like to give this territory. Review the Inuktitut Vocabulary card.
3. Have students research the lands and waters that are the hunting grounds for the Inuit and create food webs of these territories.
4. If students have the opportunity to go into the field, have them visit the same location across many seasons to observe seasonal changes in the flora and fauna.
5. Have students research how the Inuit are using western science to adapt their hunting techniques to the changing climate, and also, how the Inuit can and are contributing to large-scale science projects (e.g., interpreting satellite images).
6. If possible, have students plan and carry out an excursion on a traditional hunting territory to learn more about the flora and fauna that can be found in a region and how the ecosystems are influenced by the climate and the seasons. (Invite Elders or local residents to assist with this planning if possible.)

Modifications

Instead of reading the Climate Change: Impacts on Inuit Hunting and Fishing card to students, invite an Elder to come for a class visit and share their own stories about how they have seen the environment change over time as a result of climate change and urbanization. However, please remember that Elders do not have to share their stories or history, and always use proper and respectful protocol when approaching someone for this purpose.



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Assessment opportunities

1. Students can be assessed on their ability to locate places on a map.
2. Students' proposals can be assessed for understanding of issues in the Arctic, consideration of Inuit perspectives, and their ability to understand what data is needed and how to obtain it.
3. Observational notes can be made of a student's ability to interpret satellite images.
4. Students can be assessed on their ability to understand the relationship between the Inuit and the land and ice, making connections between the overarching themes of climate change, geography, biology, history, language, and culture.
5. Students can be assessed on their ability to recognize and use Inuktitut terms.
6. Students' understanding of how climate change is affecting the Inuit way of life in the North can be assessed throughout the lesson.
7. Students will have the ability to peer- and self-assess proposals.

Sources and additional resources

- *Indigenous Peoples Atlas of Canada – Inuit*
- [Inuit Tapiriit Kanatami](#) – The national representational organization protecting and advancing the rights and interests of Inuit in Canada.
- [Historica Canada – Canada History Week 2018: Joey Angnatok video](#)
- ["People of the Sea Ice See Cracks Forming," Hakai Magazine \(24 January 2017\)](#) by Eli Kintisch