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Lesson Plan: Exploring Warmth in the Arctic – A Blubber Experiment

Grade Level: Preschool (Ages 3-5)

Duration: 40 minutes

Subject: Science / Cultural Connection



Lesson Title: How Do Inuit Stay Warm? A Science Adventure

Objective:

- Children will explore how insulation (like blubber) helps animals and people stay warm in the cold Arctic, inspired by Inuit life.
- Children will conduct a hands-on science experiment to feel the difference between insulated and uninsulated hands in icy water.
- The lesson will connect the experiment to how Inuit use their environment to survive, fostering curiosity and appreciation.

Materials:

- Two large bowls or buckets
- Cold water and ice cubes
- Shortening (e.g., Crisco) or petroleum jelly (about 1 cup)
- Plastic sandwich bags (2 per child)
- Duct tape or rubber bands (to secure bags)
- Towels (for drying hands)
- Picture of an Arctic animal (e.g., seal or polar bear)

Optional: Images of Inuit clothing or a short book like The Inuit Thought of It by Alootook Ipellie

Optional: Audio of wind sounds for ambiance

Lesson Structure

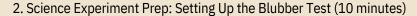
1. Introduction: Life in the Cold Arctic (5 minutes)

Goal: Set the stage with a simple cultural hook.





- Activity: Gather kids in a circle. Say, "Today, we're going to the Arctic, where the Inuit live. It's super cold there—brrr! The Inuit are smart and know how to stay warm, just like animals do."
- Show a picture of a seal or polar bear. Ask, "How do you think animals stay warm in the snow and ice?"
- Explain briefly: "Animals have blubber—a special fat under their skin—and the Inuit use things like animal hides to keep warm too. Let's try an experiment to see how blubber works!"



Goal: Prepare kids for the hands-on activity.

- Activity: Show the materials—bowls, ice water, and shortening. Say, "We're going to pretend this shortening is blubber. It's gooey, but it keeps animals warm!"
- Demonstrate:
 - 1. Fill two bowls with cold water and ice.
 - 2. Take two plastic bags: one empty, one filled with a thick layer of shortening (sealed shut).
 - 3. Put the empty bag on one hand and the "blubber" bag on the other, securing with tape or rubber bands.
- Tell kids, "We'll test how cold the water feels with and without blubber. Which hand will stay warmer?" Let them guess.
- 3. Hands-On Experiment: Feeling the Difference (15 minutes)

Goal: Engage kids in the science of insulation.

- Activity:
 - o Pair kids up or assist in small groups. Each child gets two bags: one empty, one with shortening (pre-made for safety and speed).
 - o Help them put a bag on each hand (empty on one, "blubber" on the other) and secure with tape or rubber bands.
 - o Say, "Ready? Dip both hands in the icy water for a few seconds. What do you feel?"





o Let them try, then dry their hands with towels.

- Ask: "Which hand felt colder? Why do you think the blubber hand stayed warmer?"
- Explain simply: "Blubber keeps the cold out, like a cozy blanket. Animals use it, and the Inuit use animal skins to stay warm too!"



4. Discussion: Connecting to Inuit Life (7 minutes)

Goal: Tie the experiment to Inuit culture briefly.

- Activity: Sit in a circle with a towel or fabric scrap. Say, "The Inuit live where it's icy, like our experiment. They use animal hides—like this fabric—to stay warm, just like blubber helps animals."
- Ask, "What would you use to stay warm if you lived in the Arctic?"
- Optional: Show a picture of Inuit clothing (e.g., a parka) or read a page from The Inuit Thought of It about staying warm.

5. Closing: Wrap-Up and Reflection (3 minutes)

Goal: Reinforce the science and cultural takeaway.

• Activity: Play wind sounds (optional) and say, "We learned how blubber keeps animals warm, and how the Inuit stay cozy in the cold Arctic. What was your favorite part?"

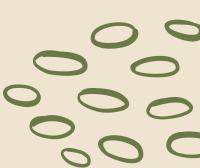
End with: "Next time you're cold, think about blubber and how smart the Inuit are at living in the snow!"

Assessment:

- Observe participation: Are kids eager to try the experiment?
- Listen to responses: Do they notice the "blubber" hand feels warmer? Can they connect it to staying warm?
- Focus on engagement, not formal answers.

Extensions:

- Add a drawing activity: "Draw an animal with blubber!"
- Try a mini version with mittens: "Do mittens work like blubber?"





Notes for Teachers:

- Safety first: Keep water shallow and supervise closely. Use petroleum jelly if shortening is messy or unavailable.
- Keep it real: Mention modern Inuit life briefly (e.g., "They use jackets now too!") to avoid over-focusing on traditional stereotypes.
- Prep bags ahead to save time—kids just slip them on and dip!

Resources:

Arctic Animal Photos: https://www.pinterest.com/pin/1097330265456994580/

Traditional Inuit Children's Songs in Inuktitut:

https://www.pinterest.com/pin/1097330265457003373/

Inspiration Video for activity: https://www.pinterest.com/pin/1097330265456998284/

