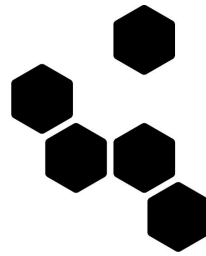


BLUBBER GLOVES



SUPERNOVA

DALHOUSIE UNIVERSITY | HALIFAX, NOVA SCOTIA

OVERVIEW

Description

Teach the children how whales and other marine mammals stay warm in the ocean by having an insulating layer called blubber. In this experiment, children will sense cold water through a blubber like material that they will make to demonstrate how body heat is preserved.

Learning Outcomes

- Body heat
- Insulation
- Marine mammals

Outline

1. Pre-make blubber glove(s) before the activity (10 mins)
2. Introduction (5 mins)
 - a. Mammals in the ocean + their traits
 - b. How to stay warm- blubber, fur, moving
3. Activity (15 mins)
4. Final discussion (5 mins)

Materials

Item	Quantity Per Child	Quantity Per Class
● All-vegetable shortening (crisco)	● N/A	● 1 pound
● Bucket/large container	● N/A	● 2
● Quart sized ziploc bag	● N/A	● 2
● Duct tape	● N/A	● 1 m
● Ice or ice pack	● N/A	● 1 tray/pack

KEY INFORMATION

Topic 1: Marine mammal examples- whales, dolphins, porpoises, manatees, seals, sea lions, walruses, polar bears, sea otters

Topic 2: Marine mammal traits- same as other mammals (like us!). Warm blooded, live birth, fur or hair, four limbs, produce milk, specialty teeth, and breathe air.

Ocean specific traits- streamlined bodies, store extra oxygen in blood and muscles when diving for long periods, can slow heart beat, and blubber! Blubber is different from normal fat that every human has. It is much thicker, making it an excellent insulator for body heat.

LESSON PLAN & PROCEDURE

Blubber Gloves

1. Pre-make blubber gloves before the activity (10 mins)
 - a. Use one of the ziploc bags as a glove to fill the other ziploc bag about a quarter full with shortening.
 - b. Place the empty ziploc bag inside the shortening filled ziploc bag so that you can fit your hand inside and there is a layer of shortening between the bags.
 - c. Fold the edges over and secure with lots of duct tape- the goal is to keep the inside of the bag clean so that when you put your hand inside you don't touch the shortening.
2. Introduction (5 mins)
 - a. Mammals in the ocean and their traits
 - i. Ask participants what makes a mammal a mammal. Discuss mammals that live in the ocean, name examples and discuss how they are different from land mammals.
 - b. Discuss how marine mammals can successfully live in polar regions without freezing
 - i. Blubber
 - ii. hair/fur- sea otters
3. Activity (15 mins)
 - a. Fill one bucket up with room temperature water and the other with ice/ice pack and water.
 - b. Let the participants put their bare hands into each bucket to feel the difference.
 - c. Have the participants put on a blubber glove and compare the water temperatures again.
4. Final Discussion (5 mins)
 - a. What did the participants feel - could they tell the difference in temperatures? Why?

Debrief

- Reiterate the purpose behind this experiment
- Ask questions like how do you think whale life would be different if it had no blubber to preserve its body heat
- Try naming all the marine mammals you can with the class and try thinking outside the box! Strange examples: polar bears, swimming pigs in the bahamas, Australian water rat, deer, American Mink, etc.