# Polar Bear Glove

Animals are able to live in different climates because of different adaptations. An adaptation is a behavioral or physical feature that helps an animal survive. Did you know penguins in Antarctica have an adaptation in common with polar bears in the Arctic?

**Materials:**

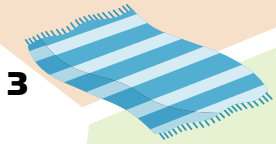
- Large Bowl
- Cold Water
- Ice
- Towel
- Spoon
- 2 Re-Sealable Bags
- Vegetable Shortening or Nut Butter

**Procedure:**

**1.** Prepare a bowl with ice and cold water. Make sure to use cold water so your ice doesn't melt too fast!


**2.** Place your hand in a plastic bag, this will help keep your hand dry, and then place your covered hand into the bowl of icy water. *Does your hand feel cold?*


**3.** Take your hand and plastic bag out of the bowl of water and dry off if you need to.




**4.** Spread the vegetable shortening around the inside of the second plastic bag.

***Science Tip:***
Put the vegetable shortening in the bag, squeeze all the air out, and seal it shut. Gently press the shortening around in the bag until it is evenly coated.


**5.** Carefully place the empty plastic bag inside of the bag with the vegetable shortening.


**6.** Place your hand back into the empty bag (inside the bag with the shortening) and dip the whole thing into the bowl of icy water. *Does it feel the same as earlier? What's different?*

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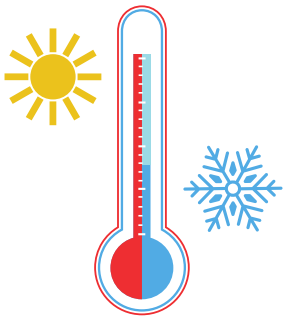
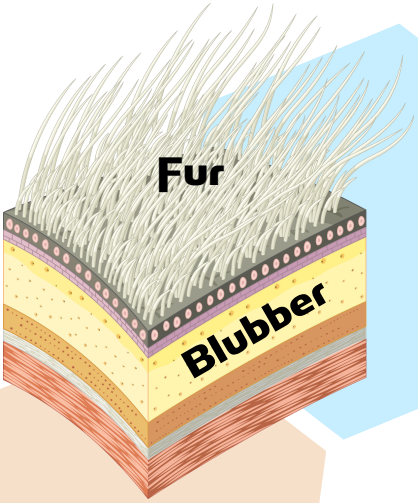
## WHAT'S HAPPENING?

What happened when you made a layer of blubber in between the two bags? Did the icy water feel as cold as the first time you felt the cold water?



Just like we have to wear extra layers to keep warm in the winter, so do animals that live in cold climates. But they don't have clothes to put on, so how do they stay warm? Animals like polar bears and the arctic fox, have a dense layer of fur that helps insulate them and block the wind. They also have a layer of blubber – or fat – just under their skin to keep them warm.




The first part of this experiment worked like their fur, it kept some of the cold off of your hand but not a lot. The second part of this experiment acted like the blubber, it kept most of the cold off of your hand.

## DID YOU KNOW?

A **zoologist** is someone who studies how animals interact with their environment. If you liked exploring this activity, maybe zoology is for you!