

Science Experiment - How do Polar Bears Stay Warm?

How can a polar bear survive living in cold weather? In the winter, polar bears are always a topic that comes up as children feel how cold the snow and winter weather is for them, and they naturally wonder about how animals who thrive in the cold can do it. This is a simple experiment that can simulate the blubber a polar bear has on its body.

What you need:

- Shortening / Lard (Room Temperature)
- Plastic Baggies
- Strong, Thick, Waterproof Tape
- Large Bucket with Water
- Ice



What to do:

Start off by making your “Mitten”

1. Start by putting some of the shortening into one of the plastic bags. Fill the bag about $\frac{3}{4}$ full.
2. Insert another plastic bag into the bag with the shortening. Make sure that none of the shortening gets into this bag.
3. Keep your hand in the bag and squish the shortening around the bag so that it is surrounded on all sides. You should be able to put your hand into the plastic bag without touching any shortening.
4. Next, fold down the top of the inside bag so that it covers over the top of the bag filled with shortening. Once folded, use the tape to seal around the top. Make sure that the tape covers and seals the tops of the bags so that no shortening can squeeze out.
5. Once you have created your mitten, you are ready to try out the experiment!
6. Start off by showing the children a bit of the shortening. Talk about how polar bears have a layer of something similar under their fur. Ask the children to make a prediction...will this help polar bears stay warm?
7. Fill up your bucket with water and ice
8. One at a time, have the children put on the mitt and then put their hand in the water. At the same time, put their bare hand in the water and have them leave both hands in for a few seconds.
9. What did the children notice about how their hands were feeling? Was their hand in the mitt protected from the cold? What hand could stay in the cold water longer?

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