



Presented by



WHAT YOU WILL NEED:

- Lard or Fat
- Tape
- Bowl of ice water
- 2 1Q Sandwich bags
- Safety goggles
- Adult supervision



POLAR INSULATION

Overview and objective:

Students will learn why animals in the arctic can survive their icy temperatures.

Procedure:

1. Place your hand in iced water and see how long you can comfortably hold it.
2. Put the lard or fat in a bowl.
3. Put your hand in a sandwich bag then scoop all of the lard out of the bowl. (keeping your hand inside the bag will keep you clean.)
4. Carefully turn the bag inside out so the lard is now inside the bag.
5. Flatten out the bag to spread the lard out evenly as you can.
6. Now put your hand into the second sandwich bag and stick it into the lard. You want to surround your hand with a thin layer of fat.
7. If you wish, you can have your parent or other adult carefully fold over and tape the two bags together so that no fat oozes out from between the bags. (we chose not to when we performed the experiment.)
8. Now put your **insulated** hand back into the bowl of ice water and see how long you can comfortably keep it submerged.

Did the layer of fat insulate your hand so you could keep it submerged longer? How long did you last?

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