

# Mitten Insulation

In the winter, we do our best to stay warm. This includes wearing warm clothes, coats, hats, mittens, and scarves. But how does this keep us warm? Are mittens and coats really warm? Let's find out together!



## Materials:

- Thermometer
- Paper
- Winter Mitten or Glove
- Writing Utensil
- Your Hands

## Procedure:

1. Use your thermometer to test the temperatures of your room, the inside of the mitten, and your hand.

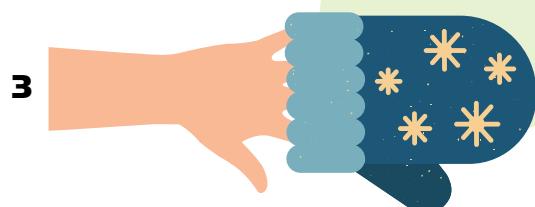
*Tip: If your thermometer doesn't read the room temperature, check your thermostat.*



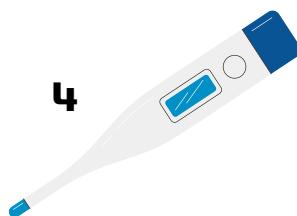
2. Make the chart to the side to record your data. Or use the printable one on the last page.

Temperature of:	Room	Hand	Mitten
Before Experiment			
During Experiment			
Comparison			

3. Place your hand into the mitten and wait a couple of minutes.



4. Check the temperature inside the mitten with your hand still inside. Is it the same, colder, or warmer than the previous tests? Why do you think the temperatures came out the way they did?



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## WHAT'S HAPPENING?

When you tested your mitten before putting your hand inside, you saw the mitten isn't really warm, but after your hand was in there, it was warmer. How? Mittens, hats, coats, and scarves help keep us warm through insulation.



Things that insulate are good at stopping hot and cold from transferring from one object to another. A good insulator for this is air! In some water bottles, there are two layers of plastic with a layer of air between them.

Because your mittens are soft and fluffy (either knitted or made from down), they are able to trap air between your hands and the outside air.



## DID YOU KNOW?

**Engineers** use insulation in many of their builds and designs including buildings and electrical projects. If you liked exploring this activity, maybe engineering is for you!

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