

THE HEAT IS ON

LAB ACTIVITY:

OBJECTIVES:

- * Students will recognize conduction as one method by which heat travels through solids.
- * Students will be able to identify materials which conduct heat.

MATERIALS:

Per group:

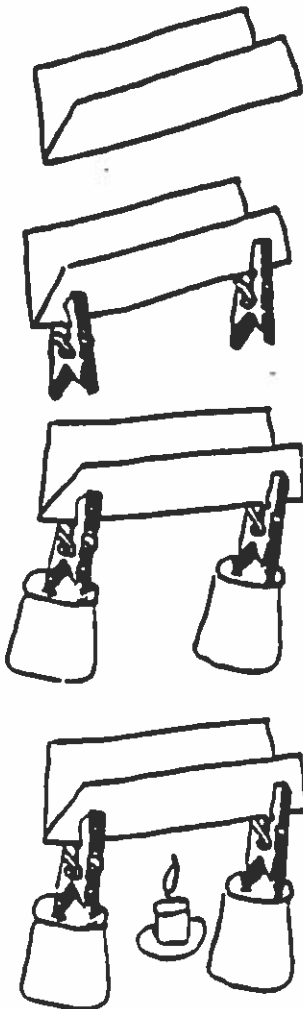
wooden clothespins- 2
styrofoam cups- 2
food warming candles- 1
wood blocks

aluminum foil
matches
toothpick
chocolate chips

PROCEDURE:

HOW DOES HEAT TRAVEL THROUGH FOIL?

1. Continually fold the sheet of foil in half lengthwise until you have formed a strip about 3 inches wide.
2. Crease the strip lengthwise to form a trough
3. Attach a clothespin to each end of the trough
(The trough should be open-side up)
4. Mount the clothespins into the bottom of each inverted styrofoam cups.
5. Place chocolate chips about 1 inch apart along the foil trough.
6. A candle should be placed beneath the center of the foil trough. (You may need to adjust the height of the candle using the wood blocks.)
7. Light the candle.
8. Observe the effects of heat on the foil trough and the chocolate chips. Use the toothpick to test for melting.



** Questions on back*

QUESTIONS:

1. Explain what caused the chips to melt.
2. Which chip melted first? In what order did they melt? Explain why they melted in the order that they did melt.
3. Would it make a difference if the candle flame were closer to or further away from the foil? Explain.
4. Would it make a difference if the foil trough was made of fewer layers? Explain.
5. Would it make a difference in the order that the chips melted if the foil trough was longer or shorter? Explain.
6. What would happen if the heat source was placed at the end of the foil trough?