

Chocolate Melt (Grade 2 Science)

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Outcome: 2-2-15 (could be modified with several types of metals to look at heat conductivity in grade seven)

Safety Factor: each group of students should be supervised by an adult. The adult lights and extinguishes the candle.

Materials for each group of 4 students:

aluminum foil
4 toothpicks
2 soup cans the same size
10 chocolate chips
a tealight candle
stopwatch

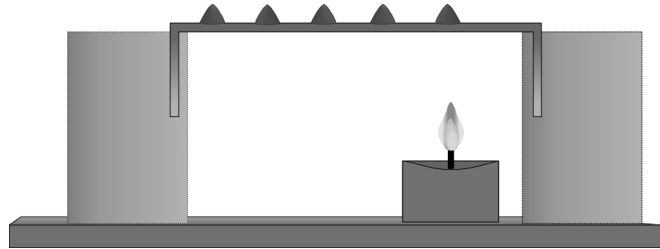


Figure 1: Remove this diagram before photocopying

Procedure:

- Cut a strip of aluminum foil 4 cm x 20 cm.
- Fold the aluminum foil lengthwise in half so the width is now 2 cm.
- Prepare a smooth foil bridge connecting the two soup cans. Make a 4 cm bend at each end of the bridge to hook over and inside each can.
- Line up five chocolate chips on your bridge an equal distance apart.
- Place the tealight candle under one end of the bridge.
- Draw and label a diagram of the set up. Remember to number each chocolate chip beginning with number 1 above the candle.
- Each member of the group should predict the order in which you think the chocolate chips will melt.
- Have the adult light the candle and one member of the group start the stopwatch. Another partner records the times when each chip begins to melt.
- Answer on the sheet provided.
- With the adult assisting, repeat the experiment, but this time place the candle under the middle chip. Predict the order of melting.
- Complete the chocolate melt activity sheet.

CHOCOLATE MELT ACTIVITY SHEET

TRIAL 1

Set up your experiment as directed by your teacher.

Draw your set up and label it carefully.

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Prediction:

I think chocolate chip number _____ will melt first because _____
_____.

Observe one chip as it melts. Check the chocolate chip with your toothpick to test if it is melted.
Record your observations.

Record the melting time for each chip:

1. _____ 2. _____ 3. _____ 4. _____ 5. _____

Why do you think they melted in this order?

TRIAL 2

With the adult help you repeat the experiment. Put the candle under the middle chip. Predict the order of melting.

Prediction:

I think number _____ will melt first because _____
_____.

Start the stopwatch and write down when each chip has begun to melt.

1. _____ 2. _____ 3. _____ 4. _____ 5. _____

With adult assistance calculate the total melting time for both trials.

Trial 1 _____

Trail 2 _____

Explain what you think caused the difference in the melting times.