

# Lab 3 – Specific Heat Lab

## Introduction:

Write 10 sentences that talk about the topics in chapter 16. You can use your notes, the textbook, vocabulary, etc. to help you.

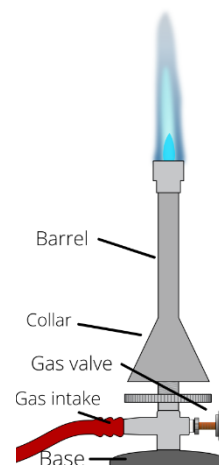
## Materials: (copy the materials into the lab notebook)

Bunsen burner

wax drops

heat conductor wand

timer or phone



## Procedure: (copy the procedure into the lab notebook)

1. I will help your group light the Bunsen burner.
2. Press a wax drop into the space at the end of each metal rod.
3. Hold the wand over the Bunsen burner so that the flame touches the center disk. Start the timer.
4. Record the time it takes for each wax drop to melt. The metals are labeled on the center disc. S = stainless steel, B = brass, A = aluminum, NS = unknown, and C = copper

**Data: (You can tape the data chart ONLY in the lab notebook. All other sections must be hand written in BLACK INK.)**

Data Chart	
Name of Metal	Time for Wax to Melt


**Questions: (Copy the questions and answer them in the lab notebook)**

1. Which metal on the wand (not in the chart) has the lowest specific heat?
2. Which metal on the wand has the highest specific heat?
3. Based on the specific heat chart, which metal could be the unknown metal on the wand? (Tape the chart below in your notebook.)

Specific Heat Table	
gold	0.129 J/g°C
tin	0.210 J/g°C
silver	0.24 J/g°C
nickel	0.44 J/g°C
titanium	0.15 J/g°C

4. Which metal experiences the fastest change in temperature, one with a low specific heat or one with a high specific heat?
5. What is the mass of a sample of gold (specific heat = 0.129 J/g°C), if 1250 J of heat raises the temperature from 50°C to 75°C?

**Conclusion:**

Write 3 sentences for the conclusion. They can be about anything that you learned, mistakes that you made during the lab, or any real life connections that you can use to relate to the lab.

