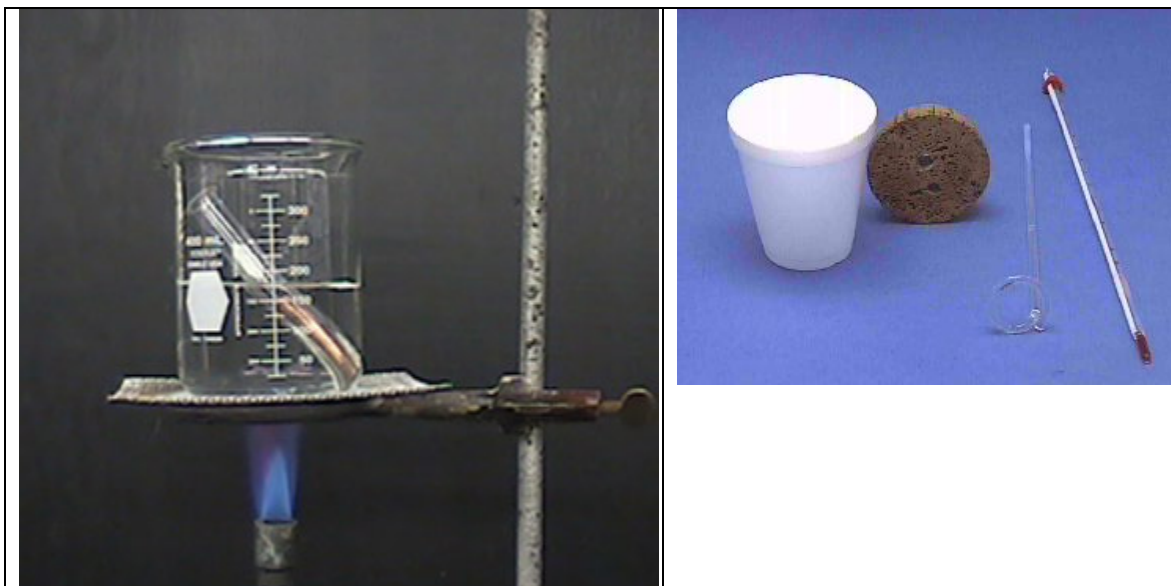


**Pre-Lab Assignment:
Determining the Specific Heat of a Metal**



DATA TABLE

Mass of metal shot	25.0 g
Mass of cool water in Styrofoam cup	100.0 g
Initial temp of metal shot	99.6 °C
Initial temp of cool water in Styrofoam cup	22.4 °C
Final temperature of water + metal in Styro cup	26.1 °C

Use the above pictures and data to answer the following questions.

- 1) What is the specific heat of water?
- 2) Design an experiment to determine the specific heat of a metal. The pictures and data above will guide you and give you some ideas. (Hint:

$$Q_{\text{lost}} = - Q_{\text{gained}}$$

- 3) Calculate the specific heat of the metal from the data above.

Hints: $Q_{\text{lost}} = - Q_{\text{gained}}$ and $Q = mC\Delta T$

- 4) What is the identity of the metal, based on your answer to #3? (Use p. 72 of your textbook.)