

Temperature Lab Name: \_\_\_\_\_ period: \_\_\_\_\_ 40/1200

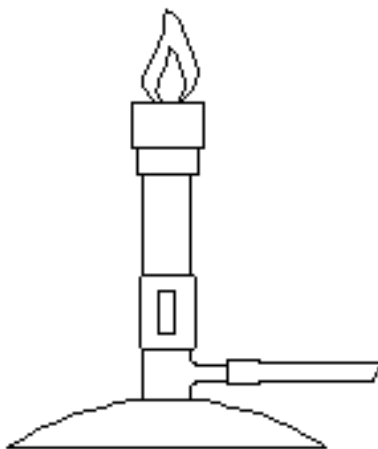
Objective: To learn how to measure with the centigrade scale thermometers; to practice temperature conversions, practice percent error, and practice lab safety.

Materials needed: Bunsen burner, lighter, ring stand, ring, 500 mL beaker, a thermometer (centigrade), and eye goggles.

First: Observe demo by teacher. Learn what each piece of equipment is called. Watch how a Bunsen burner is lit safely. Learn how to use the lighters. Learn how to replace the flints.

Procedure: we will measure five different the temperatures listed in the data table in centigrade, then do temperature conversions into Kelvin. Finally we will compare our results to the accepted values provided by the teacher and do our percent error calculations.

Temp Lab Data Table	Measured Temp. centigrade	Converted Temp. Kelvin	Actual Temp provided by Teacher	Your % Error
ice water				
tap water				
boiling deionized water				
boiling salty water				
air				



To the left is a sample Bunsen Burner.

- Label where the gas enters.
- Label where the air/oxygen enters.
- Label the hottest part of the flame.

Lab QUESTIONS...

1. Why do we use goggles in lab ALL THE TIME?
2. Why do we tie back long hair or loose sleeves? Why do we never wear open toed shoes?
3. What accounts for the errors in temperature measurement between your measures and the accepted values?
4. Assuming you can read the F and C thermometers equally well, why would a Fahrenheit thermometer more accurate than a centigrade one?
5. If the F thermometer is more accurate, why don't we use them in chemistry more often?
6. Draw the picture of the Fahrenheit, Centigrade and Kelvin thermometers. Use two straight lines representing the boiling and freezing points of water. Show room temperature (about 70 F) on the three thermometers as well.

Which of these temperatures is the coldest? Circle the lowest temperatures.			
set 1	25° F	25°C	297K
set 2	350K	78°C	350° F
set 3	0K	0°C	0° F
set 4	273K	1°C	100° C
set 5	99°C	399 K	299 K
set 6	32°F	0°C	274K

This lab report	includes	points
cover page	Science title, fun title, introduction: Why did we do this lab? What is the point?	1 + 1 = 2
2	data table, label the drawing, math for temp conversions, % Errors	10
3	Lab questions above	6
4	Temperature Boxes	2
5	conclusion: what did you learn, summary of your findings	5
deduct five points for lateness lab due on: _____		25