

PLEASE NOTE: EVERYONE IN YOUR LAB GROUP MUST TURN IN THEIR OWN PAPER! THIS IS DUE ON TUESDAY SEPTEMBER 14TH

YOU WILL HAVE 12 MINUTES AT EACH STATION

Working in groups of 3 – 4 students per group (6 groups total)

Station #1

Weight the objects in grams to the most precise measurement that you can with the triple beam balance. Convert your answer into both milligrams and kilograms. If there are 28.4 grams in one ounce, convert your mass to ounces.

Object	Mass in grams	Mass in milligrams	Mass in kilograms	Mass in ounces
Rock				
Metal Slug				

Station #2

Measure the dimensions of the glass slide in centimeters as precisely as you can. Convert these measurements to meters and millimeters. If there are 2.54 centimeters in one inch, calculate the dimensions in inches. What is the area of the slide in cm^2 and square inches?

	Length in cm	Width in cm	Length in Meters	Width in Meters	Width in mm	Length in mm	Length in inches	Width in inches
Microscope Slide								

	Area in cm^2	Area in square inches
Microscope Slide		

Station #3

Measure the dimensions of the plastic cube and the aluminum rectangle in cm. Calculate the volume of the two objects in cm^3 . Record the mass of the objects and determine their density. Remember that Density = mass/volume and the units should be in grams/cm^3 .

	Length in cm	Width in cm	Height in cm	Volume in cm^3	Mass in grams	Density in gm/cm^3
Plastic Cube						
Aluminum Rectangle						

Station #4

Using the water displacement method, find the volume of the two rock samples. Record the volume to the nearest 0.1 of a milliliter. Find the mass of the two objects and calculate the density of the two rock samples. Using the beaker calculate the density of the larger rock sample.

	Mass of the sample in grams	Volume of the sample in ml	Density of the rock sample
Rock Sample #1 Small and light			
Rock Sample #2 Small and dark			
Rock sample #3 Large			

Which volume measuring device gives you the most precise measurement? Why?

Station #5

Record the room temperature. Look up the temperature outdoor on the weather station (This will be in Fahrenheit). Fill a beaker with 250 ml of warm tap water. Fill the second beaker with 200 ml of cold tap water and add a handful of ice to this beaker. Record the temperature in each beaker to the nearest 1/10 of a degree Celsius. Convert all of these temperatures to both Fahrenheit and Kelvin degrees.

	Temperature in °C	Temperature in °F	Temperature in K
Room Temperature			
Outside Temperature			
Beaker with warm tap water			
Beaker with water and ice			
Normal Body Temperature		98.6°F	
Water Freezing	0°C		
Water Boiling		212°F	

Station #6

Take a 1 liter beaker of water and fill it with 400 ml of warm tap water. Record the initial temperature. Place a 600 ml of ice into the beaker and record the temperature every 15 seconds for 3 minutes while gently stirring (Do not use the thermometer for stirring). Make a line graph below with time on the x-axis and temperature on the y-axis using your data. Calculate the average change in temperature per minute from the graph.

Time	0	:15	:30	:45	1:00	1:15	1:30	1:45	2:00	2:15	2:30	2:45	3:00
Temperature													

Time and Temperature Graph

