**Review sheet for Benchmark 1**

**Dear Students go over your notes and PowerPoints if you feel the need!! This is a benchmark worth 40% don’t take it lightly!**

1. The piece of equipment that would lead the greatest experimental error when measuring out liquid is the **Beaker**
2. The 4 different ways to separate solids and liquids from each other are:

* Filtering : based on particle size
* Chromatography: interaction with solvents
* Distillation: is based on boiling point

**You can look up the images on google to help you identify them**

1. Make sure you are able to read Graduate cylinders
2. Why do you have to do at least 3 trials from each experiment? **To verify the results.**
3. Know the definition of Precise and Accurate.
4. If you need to mix acid and water always remember: **add acid to water**
5. If you get any chemicals in your eyes or on your skin, **always flush with water immediately.**
6. Know your scientific Notation, check the powerpoint and follow the examples. 15600 = 1.56 x 10^3
7. Review Significant figures : on CANVAS!! Example: 100.62 = 5 significant figures
8. Make sure you know the formula for percent error!!!
9. Make sure you know the formula for density!!!
10. When you put a thermometer in a beaker make sure the thermometer does not touch the base of the beaker or stay on top of the water. Your thermometer should always be in the middle of the water.
11. Remember if you are asked to determine the density in a graduate cylinder while an object is in ( just like I showed you in class) find the difference between the water in the graduate cylinder and the water after the object has been added. SUBTRACT!!
12. Which tool to use to carry a tube over fire \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. Any time you see the following words “ the DIFFERENCE BEWTEEN TWO QUANITIES “ know that you have to subtract.
14. When doing an experiment and poisons fumes come out , that experiment should be done **under a fume hood**.
15. When trying to ignite a Benson burner after 3 attempts shut off the gas and wait for 10 minutes for the gas to evaporate then try again.
16. When done identifying your independent and dependent variable always summarize by drawing a graph.
17. Remember to find the MEAN? Add all numbers then divide by the number of numbers. Example : 2+3+5 / 3
18. Rounding to the 2nd …. 2356000 = 2400000
19. Remember the rules of adding and subtracting / multiplying and dividing
20. Review how to find the number of protons, electrons, and neutrons.
21. Be able to label the atomic number and the atomic mass.
22. Review your scientist :

* Dalton : came up with atomic theory and said that atoms are indivisible building blocks.
* Rutherford: gold foil experiment, protons are positive, and the atoms has an empty space.
* Noble gases are inert which means their last shell is complete. Valence shells you count 8 and back don’t forget.
* Milikan – did the oil experiment and discovered the charges of an electron.
* The father of modern chemistry is LOVOSIER