**Unit NOS Study Guide with Answers**

**Test will be Thursday 9/24/15**

**This is a list of topics that you should know or be familiar with for the Test.**

* Be familiar with the lab safety rules that we went over in the beginning of the school year.
	+ Tell your teacher about an emergency such as, fire, injury, breakages, or spills.
	+ Read and follow all directions in the order they are written
	+ Keep your lab area clean and neat.
	+ Wear safety goggles when told to and for the entire experiment.
	+ Never taste, smell, or touch a chemical unless you are told to do so.
	+ Check glassware for cracks, chips, or scratches before use.
	+ Never lean over or reach across a flame. Use tongs or mitts to handle hot objects.
	+ Wash hands after working with chemicals.
* Review the lab tools discussed in class and their uses (graduated cylinder, balance, meter stick etc…).
	+ Electronic/standard balance- measure the mass of an object
	+ Graduated cylinder- precisely measures liquid volume
	+ Meter stick- used to measure the length of objects
* Know how to convert in the SI system (just like you did on the quiz)

**Kilo Hecto Deka Meter Deci Centi Milli**

**1,000 100 10 Liter .1 .01 .001**

**Gram**

 **0 (Base Unit)**

* Know the standard SI base units for Mass, Time, Length, and Temperature.
	+ Mass= Kilogram
	+ Time= Second
	+ Length= Meter
	+ Temperature= Kelvin
* Know the steps of the Scientific Method.
	+ Ask questions
	+ Hypothesize and predict- a testable educated guess
	+ Test hypothesis
	+ Analyze results
	+ Draw conclusions
	+ Communicate results
* Know what you should do if your hypothesis is right or wrong.
	+ Retest your data (a few times) to confirm
	+ Start over if data is inconclusive- modify or revise the original hypothesis
* Know what Physical Science is.
	+ Physical science is the study of matter and energy
* Know the difference between observations and inferences.
	+ Observations- using your senses to gather information
	+ Inferences- a logical explanation of an observation based upon past experience
* Know the difference between a theory and a law.
	+ Theory- a explanation based on knowledge gained from many observations, but can be proven wrong
	+ Law- a rule that describes a repeatable pattern in nature
* Know the difference between independent and dependent variables.
	+ Independent- The variable that is changed by the investigator in an experiment
	+ Dependent- the variable that is being measured or observed during an experiment
* Know the difference between the control and the experimental groups.
	+ Control group- The group in an experiment where the independent variable does NOT change.
	+ Experimental group- the group in an experiment that receives the variable being tested.
* Know the difference between qualitative and quantitative data.
	+ Qualitative- has to do with WORDS
	+ Quantitative-has to do with NUMBERS (quantity)
* Be able to pick the independent/dependent variables, constants and control/experimental groups out of a given experiment.

**Unit Nos Study Guide without answers**

**This is a list of topics that you should know or be familiar with for the Test.**

* Be familiar with the lab safety rules that we went over in the beginning of the school year.
* Review the lab tools discussed in class and their uses (graduated cylinder, balance, meter stick etc…).
* Know how to convert in the SI system (just like you did on the quiz)
* Know the standard SI base units for Mass, Time, Length, and Temperature.
* Know the steps of the Scientific Method.
* Know what you should do if your hypothesis is right or wrong.
* Know what Physical Science is.
* Know the difference between observations and inferences.
* Know the difference between a theory and a law.
* Know the difference between independent and dependent variables.
* Know the difference between the control and the experimental groups.
* Know the difference between qualitative and quantitative data.
* Be able to pick the independent/dependent variables, constants and control/experimental groups out of a given experiment.