Unit Mastery Stamp Sheet Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Atomic Structure Period: \_\_\_\_\_ Seat #: \_\_\_\_\_\_ - \_\_\_\_\_

Directions: This stamp sheet will be used to track your progress towards mastery of the content and skills required in your chemistry class. It will remain in the classroom so it cannot get lost. Please make sure your put it back in the Stamp Sheet bin when you are finished.

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| Topic | # of Q Correct on Quiz | # of Problems To Do | Practice Problems |
| Scientific Notation |  |  | **#1** | Express 295 in scientific notation  |
| **#2** | Write 0.456 in scientific notation |
| **#3** | Express 430000 in scientific notation |
| **#4\*** | Write 0.000005687 in scientific notation |
| **#5\*** | What is wrong with the following number: 87.6 x 10-3 |
| Metric System |  |  | **#6** | How many grams are in 3.2 kilograms? |
| **#7** | Convert: 97.3 L = \_\_\_\_\_\_\_\_\_\_\_\_\_ mL. |
| **#8** | Convert 46 cm into m |
| **#9\*** | What are the metric prefixes? What is the mnemonic we use to remember them? |
| **#10\*** | When you convert from mm to meters are you multiplying or dividing by 100? |
| Conversions |  |  | **#11** | Convert 68.3 cm to inches (2.54 cm = 1 in). |
| **#12** | Convert 21.4 kg to pounds (1 lb = 453.6 g). |
| **#13** | Convert 634 mi to kilometers (1 m = 1.094 yd; 1 mi = 1760. yd). |
| **#14\*** | How many cm are in 3.2 mi? Put ans. in sci. notation. Look up the conversions |
| **#15\*** | How many tablespoons are in a half gallon of milk? Look up the conversions |
| Density |  |  | **#16** | If a 52-g sample of a metal has a volume of 19.63 mL, what is the density of the metal? |
| **#17** | The density of copper is 8.92 g/mL. The mass of a piece of copper that has a volume of 35.8 mL is what? |
| **#18** | Find the volume of an object that has a density of 2.85 g/mL and weighs 95.7 g. |
| **#19\*** | Rearrange the density equation to solve for each variable. D=m/V In other words, show me how to rearrange the equation to solve for mass, and then rearrange the equation to solve for volume.  |
| **#20\*** | Which of the following objects will float in water? Object #1 has a volume of 40 mL and a mass of 6 grams. Object #2 has a volume of 25 mL and a mass of 38 grams. Water has a density of 1 g/mL |
| Chemical/ Physical Properties and Changes  |  |  | **#21** | Explain the difference between a chemical property and a physical property.  |
| **#22** | Explain the difference between a chemical change and a physical change.  |
| **#23** | Give five examples of each: chemical property, physical property, chemical change, and physical change.  |
| **#24\*** | How could you rewrite the following statement to change it from a chemical change statement to a chemical property statement? Water is reacting with acid.  |
| **#25\*** | Are “phase changes” chemical or physical? Why? State and argue your claim in at least four complete sentences. Make sure you identify what phase changes are (definition and/or examples), what your claim is, and back your claim up with explanation!  |

Resources: *Use the following pages in your textbook as a source of information.*

Scientific Notation: Metric System:
Conversions: Density:

Chemical/Physical Properties/Changes: