Scientific Method & Measurement Test Study Guide

**Vocabulary**: In your own words, write a definition for the following.

1. Mass
2. Volume
3. Length
4. Density
5. SI/Metric system
6. English/Standard system
7. Independent/manipulated variable
8. Dependent/responsive variable
9. Control group/variable
10. Standardizing/constant variable

**Discussion Questions**

1. Compare and contrast the English/Standard system versus the Metric/SI system of measurements. Which do scientists prefer to use and why?
2. Practice using the metric system ladder to convert numbers from one metric unit to another by completing the Metric Mania worksheet.
3. What are the three main units used in the metric system? (Think of the rap!)
4. Calculate the density of an object when given mass and volume by creating 5 practice problems that you solve.
5. List the steps of the scientific method and briefly describe each.
6. Describe how a theory and a law are different.

\* Be able to convert common sense units using the English system. Such as minutes to seconds (60 seconds in a minute), inches to feet (12 inches in a foot), or feet to miles (5,280 feet in a mile).

<https://www.youtube.com/watch?v=jqmIbcId3B0> (this is a great video to watch if you don’t know how to do this)

\* Be able to identify the independent/manipulated, dependent/responsive, control and constant variable in an experiment.

**Practice Test**: Complete the following questions to get an idea what kind of questions you will find on the test.

[Click Here](https://forms.office.com/Pages/ResponsePage.aspx?id=j_Z4Rc2G-UqzF5Pjgmyg9T-tHmWR88dOo_GLPwumKIxUOE9RTzk0NzYzS0hOTEM3VFdVWVdXTVBVRS4u)

Bring a scientific calculator to use during your test!