

Physical Science  
Study Guide  
Unit 1 Quiz – Wednesday, February 3

**Key Terms:**

- Unit
- Conversion
- Conversion Factor
- SI Units
- Metric
- Per
- Error
- Precision
- Accuracy
- Percent Error
- Dependent Variable
- Accepted Value
- Best-Fit Line
- Circumference
- Diameter
- Pi
- Independent Variable
- Controlled Experiment

**Quiz Material by Subject:**

Measuring

- Given a unit to measure with, be able to take measurements of various objects.
- Know to include units with your measurements.
- Understand how precision and accuracy affect your values.
- Be able to convert between units given a conversion factor.
- Understand why units are standardized and which system is used for SI units.
- Be able to create and fill in a table for measurements

Graphing

- Once you have collected data, be able to plot your points.
- Know on which axis to put each variable.
- Be able to draw your best-fit line for the data.
- Remember to label the axis, including units.
- Always include a title.
- Axis should extend past needed values.

Analyzing Data

- Understand the difference between the independent and dependent variables and given an experiment, be able to identify each.
- Be able to find the equation and slope of your best-fit line.
- Be able to write a sentence about your data using your analysis.
- Know how to calculate percent error.

See “Essential Questions/Instructional Goals” File for the Unit on my website

**Important Equations (you will not be given these):**

$$y = mx + b \quad m = \frac{\text{rise}}{\text{run}} \quad \% \text{ Error} = \frac{|\text{accepted value} - \text{measured value}|}{\text{accepted value}} * 100\%$$