**Nature of Science Test Study Guide**

The Scientific Method

List the steps in the scientific method below

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Gathering information using your 5 senses.
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Making an educated guess as to what is happening based on your observations.
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Creating a testable guess from your inferences to explain what is happening. This must always be written as an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ statement.
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Testing your hypothesis.
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Reviewing the data that you collected to confirm or deny your hypothesis. If it is not correct, you will go back and make a new hypothesis.
6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Where you are summarizing your experiment and sharing the information with other scientists.

Measurement

1. When measuring the mass of an object I will use a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. When measuring the volume of a liquid, I will use a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. When measuring the length of an object, I will use a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. When in science class, I will always use the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ side of the ruler.

Measure the following lines to the nearest half centimeter with a ruler.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Metric Conversions:

1. The base unit for mass is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. The base unit for length is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. The base unit for volume of a liquid is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Convert the following units.

**Kilo – Hecto – Deka –Unit – Deci – Centi – Milli**

1. 7.46 ml = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ L
2. 5.64 g = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mg
3. 4.5 km = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_m
4. .094 mg = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_g
5. 100 cm = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mm
6. 52 mm = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_m
7. 84.38 L = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mL

Word Problems

1. You are driving to Las Vegas and you see a sign that says that it is 145 kilometers to the city. How many meters do you have left to drive?
2. A kitten weighs 500 g. A puppy weighs 2 kg. Which one weighs more? How much more?
3. I make 2.5 kg of popcorn. During a movie, I eat 750 grams of it. How many grams are left?
4. Tony made 14 L of lemonade for a party. His guests drink 9500 mL of it. How many milliliters of Lemonade does Tony have left?