**Nature of Science Test Study Guide**

The Scientific Method

List the steps in the scientific method below

1. Observe: Gathering information using your 5 senses.
2. Infer: Making an educated guess as to what is happening based on your observations.
3. Hypothesize: Creating a testable guess from your inferences to explain what is happening. This must always be written as an If…. Then…. statement.
4. Experiment\_: Testing your hypothesis.
5. Analyze\_: 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. Communication: 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 triple beam balance.
2. When measuring the volume of a liquid, I will use a Graduated cylinder.
3. When measuring the length of an object, I will use a Ruler.
4. When in science class, I will always use the Centimeter side of the ruler.

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

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Metric Conversions:

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

Convert the following units.

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

1. 7.46 ml = \_\_\_.00746\_\_\_\_\_\_\_\_\_\_ L
2. 5.64 g = \_\_\_\_\_5640.\_\_\_\_\_\_mg
3. 4.5 km = \_\_\_\_\_4500.\_\_\_\_\_\_\_m
4. .094 mg = \_\_\_\_\_\_.000094\_\_\_\_\_\_g
5. 100 cm = \_\_\_\_\_1000.\_\_\_\_\_\_\_\_mm
6. 52 mm = \_.052\_\_\_\_\_\_\_\_\_m
7. 84.38 L = \_\_\_\_\_84380.\_\_\_\_\_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?

145000 meters

1. A kitten weighs 500 g. A puppy weighs 2 kg. Which one weighs more? How much more?

The Puppy weighs more. It weighs 1500 g more

1. I make 2.5 kg of popcorn. During a movie, I eat 750 grams of it. How many grams are left?

1750 grams of popcorn left

1. 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?

4500 milliliters of lemonade left