Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Measurement: Study Guide

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| **Objectives** |  |
| Define the following: |  |
| 1. accuracy |  |
| 1. precision |  |
| 1. significant figures (digits) |  |
| 1. uncertain digits |  |
| 1. Measure the physical properties of matter in metric units. Sketch a ruler with units at right. |  |
| 1. Determine the correct number of decimal places to report a measurement including the uncertain digit. Make a sketch at the right. |  |
| 1. Distinguish between accuracy and precision. |  |
| 1. I can show that all measurements have uncertainty. |  |
| 1. I can state the relationship between millimeters, centimeters, decimeters, base units and kilometers. Write the relationships at the right side. (examples: \_\_\_mm = 1 cm, \_\_\_\_mm = 1 m) |  |
| 1. I can explain the prefixes nano micro, milli, centi, deci, kilo, mega |  |
| 1. I can convert metric system units involving length (smaller unit 🡪 bigger unit = smaller number, bigger unit 🡪 smaller unit = bigger number. Show examples at right |  |
| 1. I can explain significant figures. |  |
| 1. I can use the appropriate unit to express the measurement of an object (i.e.: length and mass of a car, length of a bacteria cell, volume of 5 drops of water, mass of a coin, volume of a pitcher of ice tea). |  |
| 1. I can state the base units that we will be using in this course. |  |
| 1. I can state the basic quantities that for the base units measure. |  |
| 1. I can use the appropriate metric prefixes with the base units |  |
| 1. I can state the relationship between milligrams, grams, and kilograms. Write the relationships at the right side |  |
| 1. I can state the relationship between milliliters, liters, and kiloliters. Write the relationships at the right side |  |
| 1. Given a relationship, I can solve a conversion problem. Example: 1 glug = 3.7 blings.   How many glugs are equivalent to 17. 5 blings? |  |