

Name: _____ Period: _____ Date: _____

IPC – MEASUREMENT IN SCIENCE

Slides 1 & 2

1. Complete the table comparing Customary Units with Metric System Units.

Customary System	Measure For	Metric System
	Distance	
	Liquids	
	Weight / Mass	
	Temperature	

Slide 3

2. **What is a standard?**
3. **Why do we need standards in science?**

Slide 4 –

4. **What does SI stand for or represent?** _____
5. **What is the common name for SI?** _____
6. **From what country did the name SI originate?** _____

Slide 5 -

6. **Name at least 3 ways that we use the metric system in our everyday life.**
- a.
 - b.
 - c.

Slide 6 –

7. **Name some of the pro's and con's of using the Metric System in the United States?**

PRO'S	CON'S
•	•
•	•
•	•

Slide 7 –

8. **What do all those prefixes mean? Complete the chart below.**

PREFIX	SYMBOL	FACTOR NUMBER	FACTOR WORD
	K-		
Hecto		100	
	Da- or Dk-		Ten
BASE UNIT	METER, LITER, GRAM		
Deci		0.1	
	c-		Hundreth
Milli		0.001	

*** You can create flash cards and practice using them until you can complete a blank chart without looking at the answers.**

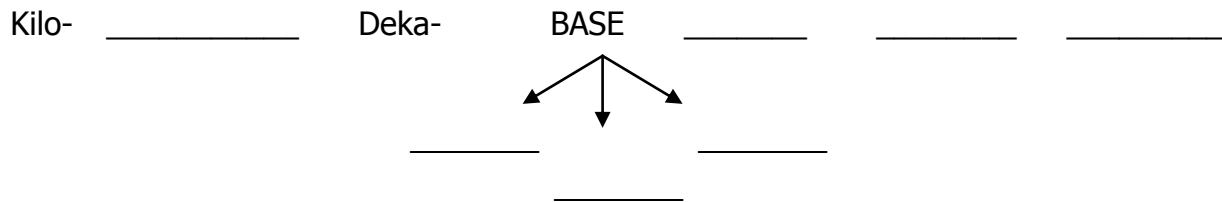
9. **Guided Practice - Putting it all together. Complete the following chart.**

Prefix	Symbol / Meaning	Unit
centi – (0.01)	cm hundredth of a meter	Meter
milli –		Liter
kilo –		Gram
hecto –		Liter
deci -		Meter
deka –		Gram

10. How can I remember the order from LARGEST to SMALLEST?

King _____ Dances _____ Center _____
_____ Henry _____ milk _____ cows on _____

11. Basically, this stands for:



Slides 10-12 –

12. State the Steps in Metric Conversions:

Step 1: _____

$$27.025 \text{ g} = \text{_____} \text{ cg}$$

Step 2: _____

K H D Base d c m

Step 3: _____

Step 4: _____

$$27.025 \text{ g} = \text{_____} \text{ cg}$$

Slides 13 & 14 –

12. **SI Units for Measurement Used in Science. Fill in the following table.**

	SI Unit & Symbol	Lab Equipment used to Measure
Length / Distance		
Volume Regular Object Formula:		
Volume Irregular Object Formula:		
Mass		
Temperature		
Time		

14. **Guided Practice – Use the letters of the choices below to answer the following scenarios.**

A. Metric Ruler B. Balance C. Thermometer D. Graduated Cylinder

_____ a. The mass of a stone

_____ f. The air temperature

_____ b. The length of your finger

_____ g. The mass of a handful of powder

_____ c. Your height

_____ h. The volume of a diamond

_____ d. The mass of a cube of sugar

_____ i. The temperature of a glass of water

_____ e. The volume of a jar of juice

_____ j. The mass of a coin

Slide 15 – Density

15. **What is Density?**

16. **Write down the formula to help in calculate Density.**

17. **If the density of a LIQUID is taken, what are the units:** _____

If the density of a SOLID is taken, what is the units: _____

18. **How would one rearrange the formula for density to determine MASS if given the density and volume of an object?**

19. **How would one rearrange the formula for density to determine VOLUME if given the density and mass of an object?**

Slide 16 –

20. **Why should you never measure an object using the “end” of your ruler?**
21. **Is the red line on the slide 6.2 cm or 1.2 cm? Explain your answer.**
22. **Guided Practice: Use a ruler to do the following activities:**
- a. Draw a line that is 3 cm.
 - b. Draw a line that is 7 cm.
 - c. Draw a line that is 1 cm.
 - d. Draw a line that is 10 mm.
 - e. Without using a ruler – how many millimeters (mm) are in 1 cm? _____

Slide 17 & 18 –

23. **Draw what the meniscus look like in a graduated cylinder in the square to the right:**
24. **Why do you think you should be at eye-level when reading the volume of liquid in a graduated cylinder?**
25. **Where should you read the liquid level if a meniscus forms in a graduated cylinder?**
26. **What are the volumes of the two graduated cylinders:**
- A. _____ B. _____

