Name _____ SOL.1

~Scientific Method Notes~

Scientific Method = _____
_____

Scientific Method Steps

Steps of the Scientific Method	Definition or Written Example	Picture Example
#1 State the Problem/ Ask a Question		
#2 Form a Hypothesis	*Variables- see next page*	
#3 Create & Perform Experiment		
#4 Collect & Record Data	Qualitative vs Quantitative	
#5 Analyze		
#6 Conclusion		

Other Important Terms

Term	Definition	Example
Observation	To observe means to gather _____ information about your surroundings using your _____	
Inference	To infer means to use the info gathered during _____ to make an _____ about things that are not necessarily seen or known	
Prediction	A prediction is a _____ of what _____ happen in the _____ based on past experience	
Theory	A theory is a _____ explanation that unifies a broad range of observations and hypotheses and that enables scientists to make _____ predictions about new situations.	
Law	A law is a statement that describes what is _____ to happen under certain sets of conditions	

~VARIABLES~

A variable is a _____ that _____ in an experiment

Types of variables

Type of Variable	Definition
Independent Variable (IV)	the variable that is _____ changed or manipulated
Dependent Variable (DV)	the variable that _____ to the IV (changes because of it)
Constants (3)	all other factors that must remain the _____ and have a _____value
Control	the _____/recommended factor used for _____ experimental effects (the do nothing)

Practice with Variables

~Graphing Notes~

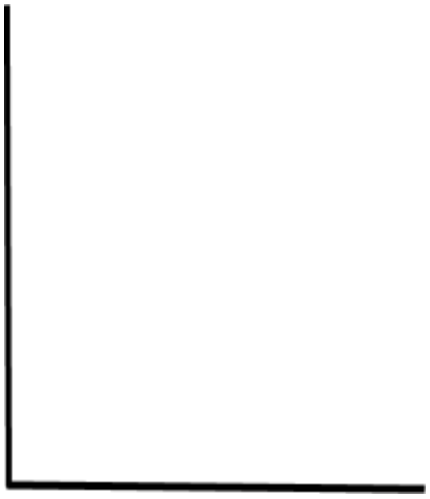
A graph shows data in _____ form

The graph allows us to make:_____

ALL GRAPHS MUST HAVE 6 THINGS

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

The IV is placed on the ____ axis
The DV is placed on the ____ axis



Bar Graphs: _____
Line Graphs: _____

~Metric System~

Definition: a _____ system based on a scale of multiples of _____
AKA: _____
When measuring YOU must include a _____ of measurement and a _____ stating how many of the units are present. No _____ allowed!

Types of Measurements	Definition	Basic unit	Example
Length	the measurement of how _____of an object		
Mass	the amount of _____ in an object always stays _____		
Weight	the measure of the pull of _____ on an object does not stay _____		
Volume	the amount of _____ an object occupies	Liquids= Solids=	
Temperature	the measurement of the amount of _____ in an object	F to **C**= (F-32)/1.8 C to **F**= (1.8 * C) + 32	

Time	the measurement of the _____ between 2 events (_____ and _____)		

~HOW TO CONVERT USING THE METRIC SYSTEM~

Kilo--	**Hecto--**	**Deka--**	**standard/ base**	**deci--**	**centi--**	**milli--**
King	*Henry*	*Died*	*slowly*	*drinking*	*chocolate*	*milk*
			Meter (m) Gram (g) Liter (L)			
thousand	hundred	ten	one	tenth	hundredth	thousandth

 MOVE **SMALL TO BIG** THEN MOVE THE DECIMAL TO THE **LEFT**

MOVE **BIG TO SMALL** THEN MOVE THE DECIMAL TO THE **RIGHT** 

Practice conversions

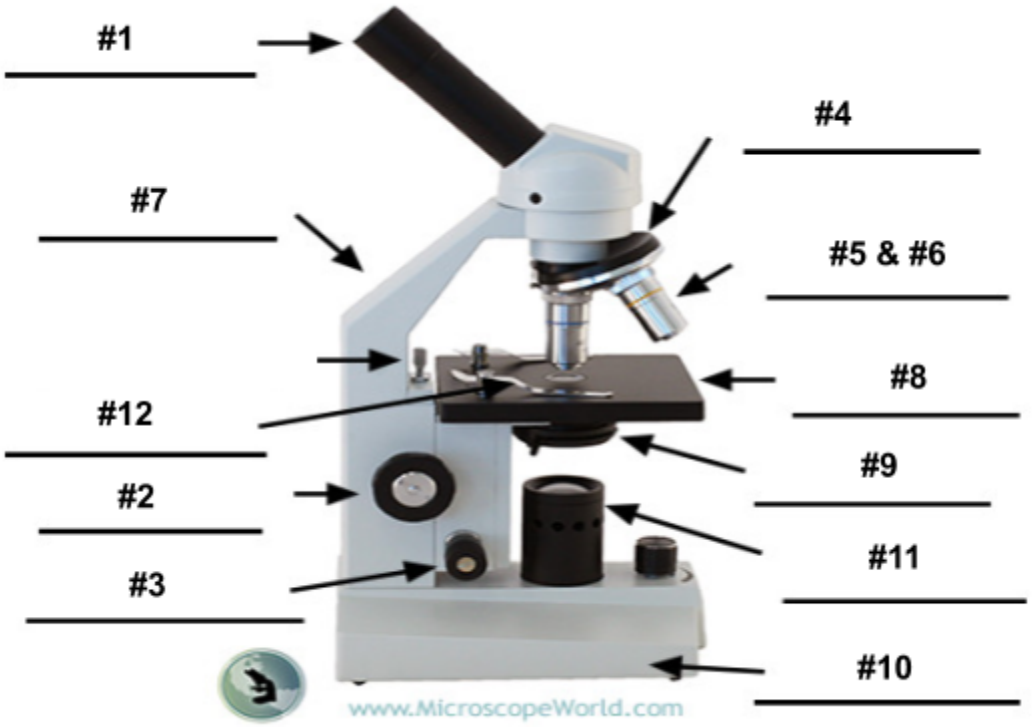
26.4 m _____ cm

~THE MICROSCOPE~

2 types of Microscopes
Electron Microscope =
Light Microscope=

~Parts of a Microscope~

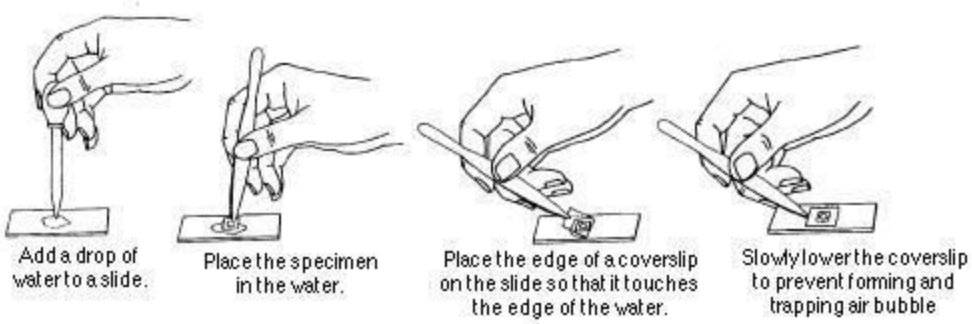
Move slide to Right but I see it move to the _____/ Move slide to the Right but I see it move to _____



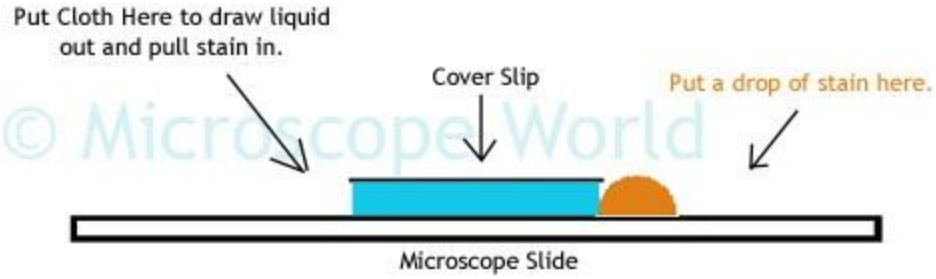
Microscope Parts

#1= Eyepiece	
#2= Course Focus Adjustment	
#3= Fine Focus Adjustment	
#4= Revolving nosepiece	
#5= High Power Objective	
#6= Low Power Objective	
#7= Arm	
#8= Stage	
#9= Diaphragm	
#10= Base	
#12= Stage Clips	

How to make a Wet Mount Slide (live specimen)



<u>How to add Stain to Wet Mount</u>



Extra Space for practice