Do Now: Matching

1. _____ Law of Conservation of Matter	a. _____ Anything that has mass and takes up space
2. _____ Matter	b. _____ Substances present at the beginning of a reaction
3. _____ Mass	c. _____ Hydrochloric acid and Alka-Seltzer
4. _____ Reactant	d. _____ Water, carbon dioxide, and salt
5. _____ Product	e. _____ Matter cannot be created or destroyed ($mass_{reactants} = mass_{products}$)
6. _____ Reactants from Monday's lab	f. _____ When two substances react to form a new substance
7. _____ Products from Monday's lab	g. _____ The amount of matter in a substance
8. _____ Chemical change	h. _____ Substances produced during a chemical reaction

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2:[illegible]

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2:00

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TIME IS UP!

1:[redacted]

What is Plagiarism?

Plagiarism

According to the Merriam-Webster Online Dictionary, to "plagiarize" means:

- To steal and pass off someone else's words or ideas as your own
- To use someone else's work without crediting the source
- To present someone else's idea or product as new and original

In other words, plagiarism is an act of fraud. It involves both stealing someone else's work and lying about it afterward.

Possible Consequences for Plagiarism:

- Get a zero on the assignment, with or without opportunity for revision
- Requirement to demonstrate proficiency another way
- An apology of action, if another student's work was copied
- Parent notification by phone, conference, or boht
- Letter to student's file, provided to family, documenting incident
- Written report demonstrating your understanding of the seriousness of plagiarism and its consequences

Scientific Method

What is the Scientific Method?

a process for experimentation that is used to explore observations and answer questions

Why is it important?

Scientists use the scientific method to have a systematic approach to problem solving

Step 1: Observations!

What is an observation?

Making a specific description

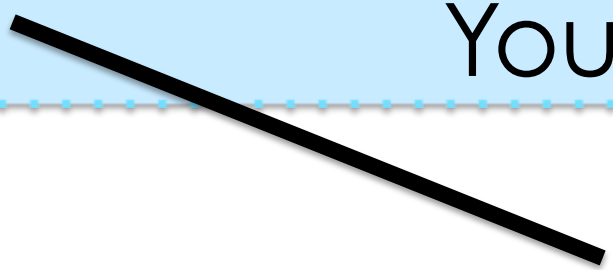
Two Types:

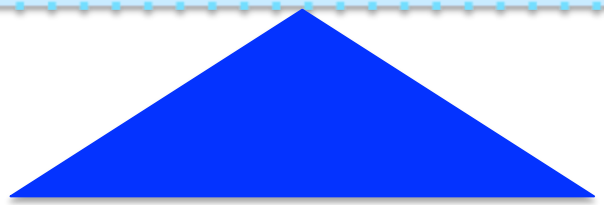
Quantitative – amounts or measurements

Qualitative - having to do with the 5 senses

Which type is better?

You decide!





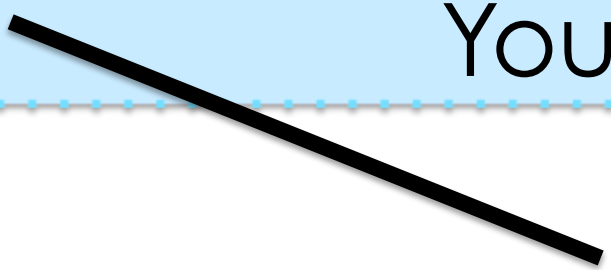
Example Observations:

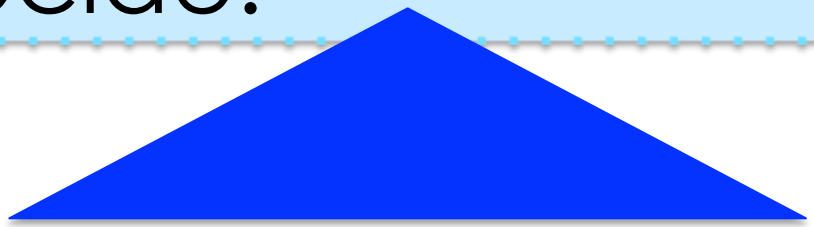
Quantitative –
The black line is 26 inches long.
The cobalt blue triangle has an area of 93 cm^2

Qualitative –
The black line is long and thin.
The cobalt blue triangle is bigger than an eraser

Which type is better?

You decide!





Example Observations:

Quantitative –
The black line is 26 inches long.
The cobalt blue triangle has an area of 93 cm^2

Quantitative observations are more specific!

What makes a good observation?

The more SPECIFIC, the BETTER!!!

Bad examples?

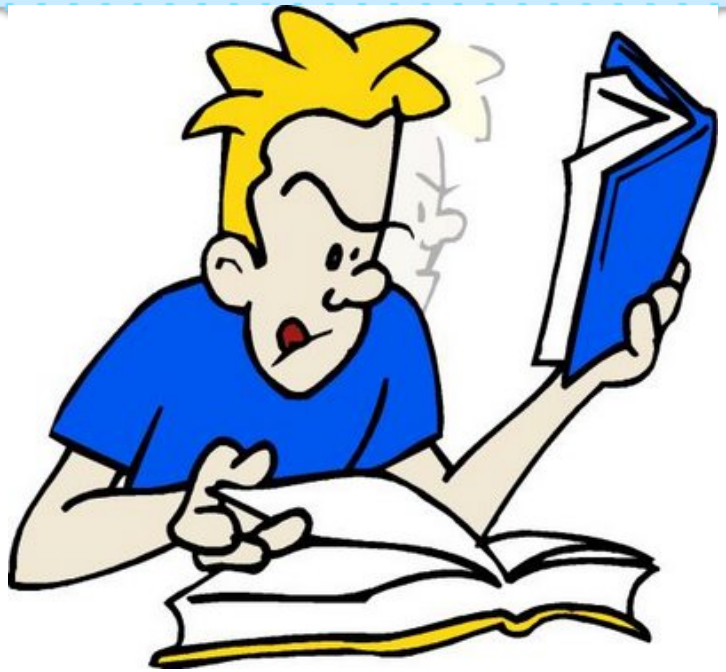
Step 2: Write Experimental Problem/ Question!

What is an Experimental Question?

Can be tested by an experiment

ALWAYS ends in a question mark

Ex. How will studying effect test grades?



Are these good or bad examples of Experimental Problems?

What is your favorite color?

How does sunlight effect plant height.

Why is the Earth round?

How much sugar can be dissolved in 100 mL of water?

Is the ball round?

Scenario 1: Johanny decided to join the Paul Cuffee track team. She noticed that she ran faster after drinking water before a race. What experimental question might she ask and test?

How much water can she drink before a race to run the fastest?

OR

What type of drink will help her run the race the fastest?

What is a Hypothesis?

A STATEMENT of what you expect the results to be!
Includes a cause and effect

Ex. More time spent studying leads to higher test grades.

Must be a statement that can stand on it's own and takes a side;

may NOT use *yes, no, or I think*…

Note: Statements do NOT end in Question Mark(?); they end in a period (.)

IN CHEMISTRY CLASS:

If _____,

then _____

because…

Let's look at example hypotheses to the experimental question:

How does eating affect weight gain?

I think that the more you eat, the more weight you will gain.

Eating candy affects weight gain.

IF a person eats less, THEN they will gain more weight.

Yes, eating more food will increase weight gain.

An increase in eating will cause an increase in weight