

Welcome!
Chem 1
Honors
Mrs. Snyder
E212



The cure for boredom is
curiosity. There is no cure for
curiosity.

Lets Talk about the Student Center



Grading

70% Tests/ Labs

15%

15% Quizzes

(Your homework is one quiz. Your warm ups are one quiz.)



When?

Tests every 3 weeks.

Quizzes **every** Thursday.

Lab every Tuesday.



Materials you will need:

1. A regular notebook
2. A **bound** lab notebook
(composition notebook- 50 cents from me or bring your own)
3. Something to write with.



Lab Notebooks

Labs will be written up in your bound lab notebook every week. You may also have handouts due from a lab. You will have to get your lab notebooks checked off after each lab.

3 times each quater, you will have to convert your infomraiton into a formal Lab Report



How much homework
am I going to have?



What happens if I
wear flip flops on
Tuesdays?



What happens if I am absent or late
and miss **a quiz** or **a test** or **a lab**?

How do I get notes I have missed?

Go to sciencewithsnyder.weebly.com



- **Parent Letters**
- **Course Syllabus**
- **Safety Contract (due Back on Friday!) (your first homework)**
- **Please PRINT your name on the student signature line on the back of your Safety Contract!**



Objective(s) for the day:
The Student will be able to
(**TSWBAT**):

1. Design a scientific experiment with controls to test a hypothesis. The experiment will include both independent and dependent variables. (Standard C1.4)



Chemistry as we know it today is a science. This discipline branched off of "alchemy" about 400 years ago.



The key to alchemy becoming chemistry was *communication!*

One thing I hope you will learn this semester is how to communicate like a scientist.

Why is that important?

So, what **is**
chemistry today?

Chapter 1 in Book!



Chemistry

Chemistry is the science of the characterization, composition, & transformation of matter. It is about change.



More than that, it is about explaining the world around us. We take most everyday chemistry, such as cooking, cleaning, medicines, plastics, and electronics for granted. Do you ever wonder **WHY** these things work?

I do.

We chemists now use nomenclature to communicate with one another.

We also use measurement rules as a communication tool.

Symbols have been standardized.

Everyone agrees what certain symbols mean so one scientist can repeat and build on the work of another scientist.



Warm Up

What is the name of the element associated with the following symbols:

S

Sn

Sb

Use the periodic table at the back of your book if you can't see the large periodic table.

Fire Drills

Where does this class go in case of:

1. Fire
2. Tornados
3. Earthquakes
4. Lock Downs

Scientific Method

1. Observations
2. Hypothesis
3. Experiment
4. Theory
5. (Scientific Law*)



Observations

Def: when you use your senses to obtain information.

Examples: You add one clear, colorless liquid to another clear colorless liquid and the mixture turns pink.



Hypothesis

Def: an explanation of some observed phenomena.

Note: This may be an "if/then" statement, but not necessarily. You could explain something you observe without ever using the words "if" and "then."



Your cat is sitting next to the fish bowl which has one fish in it. Five minutes later the cat is still there but the fish is gone. **Which is a reasonable hypothesis?**

- A) If you have a cat then your fish will disappear.
- B) The cat and the fish are similar pets.
- C) The cat ate the fish.
- D) The cat is black and the fish was blue.

Experiment

Def: a procedure used to test a hypothesis



Theory

Def: is a well-tested explanation for a broad set of observations.

A theory can never be proven. They are always subject to change. This does NOT mean any given theory is flawed.



Scientific Law

Def: a concise statement that summarizes the results of many observations and experiments.

Listen! Theories don't "graduate" to laws. Some can just be summed up with a short statement. Some can not. **AND** laws are subject to change when contradictory observations are made.



Experimental Design Review:

A part of every experiment are **variables**.

DEF: **Variables** are factors that can change during an experiment.



There are **2 types of variables**:

DEF: Manipulated variable: what you change during an experiment

DEF: Responding Variable: what you observe during an experiment

D ependent

M anipulated

R esponding

I ndependent

Y -axis

X -axis



Warm Up

In an experiment where a student wants to determine the effect of sunlight on plant growth, he has three sets of plants. The first set is given 5 hours of sunlight a day, the second set is given 7 hours, and the third set is given 9 hours. The student records the height of the plants. What is the dependent variable and what is the independent variable in this experiment?

Diet Coke and Mentos

