Welcome to Chemistry
Mrs. Rugh

Are you supposed to be here???
If you're not sure, please see me NOW.

If you're feeling pretty good you're in the right place:

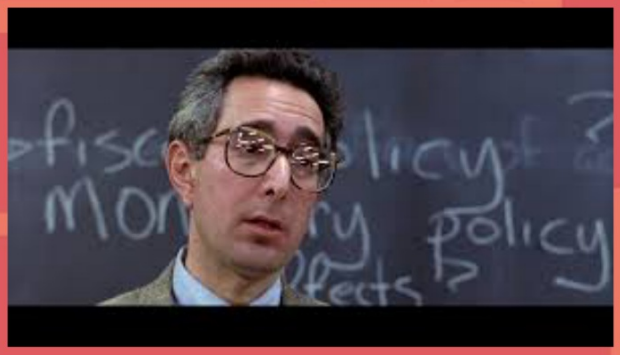
1.) Please find your seat according to the posted seating chart.

2.) Start a conversation with someone near you about **what you already know about Chemistry or what you think of when you hear the word "Chemistry"** (and please leave *Breaking Bad* out of it...)

3.) Take notes on your discussion--you will have to report! You have FIVE MINUTES.

Before we jump into this discussion, let's take care of some details:

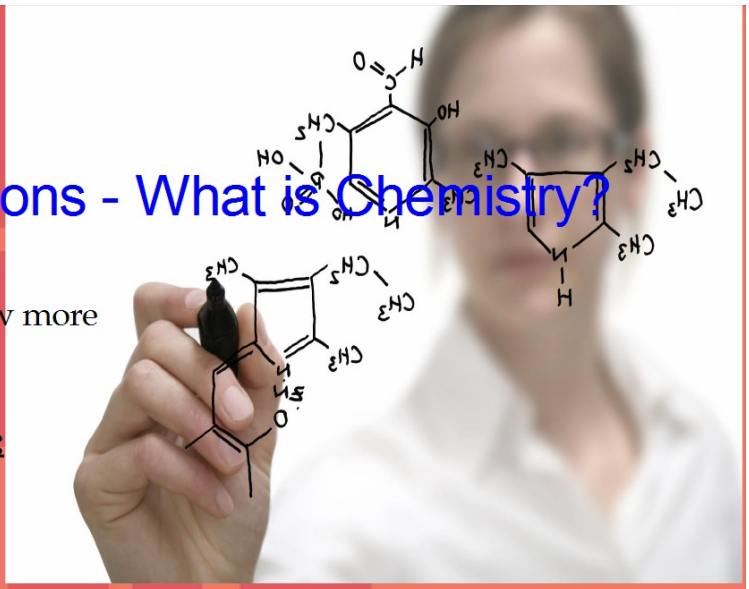
- Attendance and nicknames
- Anyone need the lunch schedule?
- Prerequisites
- Are you thinking about switching out of this class?
- Room safety -- we may need it today :)
- Textbooks...



Let's Discuss Your Discussions - What is Chemistry?

OK, actually I'm going to give you a few more things to think about before we talk

Pay very close attention!



Now, we're ready to talk. Your ideas:

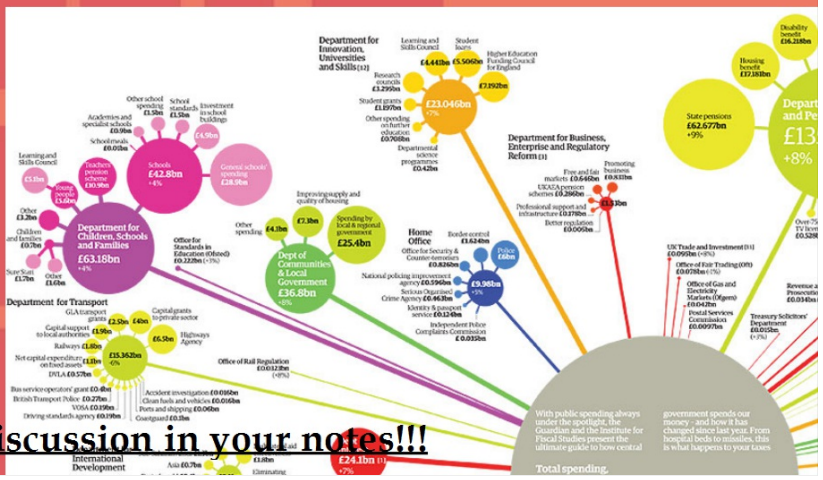
You should be recording this discussion in your notes!!!

Let's Discuss Your Discussions - Now Categorize

Let's digest those ideas..... Chemistry is a very broad topic. Refer back to what you and your classmates already know about Chemistry and try to make different categories that all the different "kinds" of Chemistry could fit into.

Take 5 more minutes to talk about what kinds of categories of Chemistry you could put your Chemistry-related ideas/topics into.

Categories You Came Up With:



You should be recording this discussion in your notes!!!

Let's Discuss - What about the WHY?

We have some categories now. How about the even broader topic of WHY? It is a common question in any classroom, but let's hope more often in a science room.

Take another 5 minutes to think about and discuss these questions:

- **If you had to argue for it, why would you say it is important to do research?**
- **What are some specific reasons you can think of to conduct research (think about different motives)?**
- **Any questions you have about the hows and whys of research?**

Record your answers to these questions in your notes.

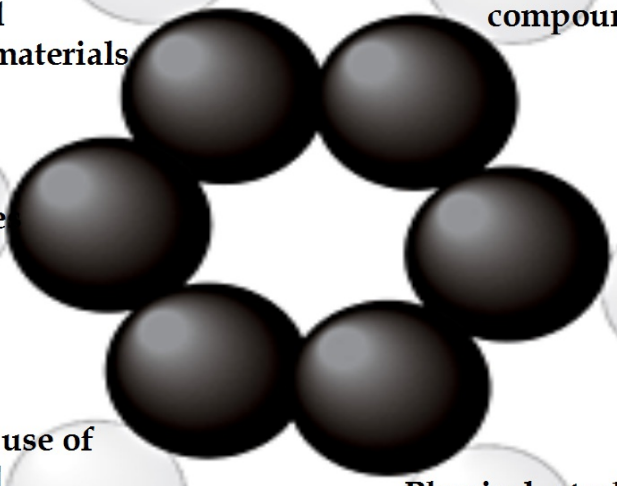
Compare these Branches of Chemistry with Your "Categories"

Chemistry - the study of the composition, structure, and properties of matter and the changes it undergoes

Branches of Chemistry

Analytical- the identification of the components and composition of materials

Organic - study of most carbon-containing compounds



Biochemistry- the study of substance and processes occuring in living things

Inorganic - study of all substances not classified as organic (those not containing carbon)

Theoretical - the use of mathematics and computers to design and predict the properties of new compounds

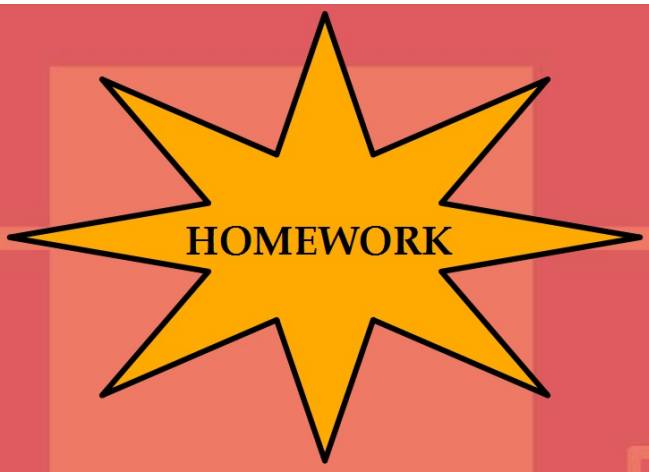
Physical- study of properties, changes, and relationships between energy and matter

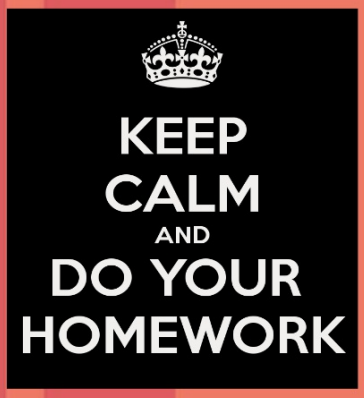
Types of Research - this is pretty technical, but we will talk about the importance of research tomorrow.

Basic Research - Carried out for the sake of increasing knowledge. Chance discoveries (i.e. accidental discoveries) can be the result of basic research.

Technological Development- The production and use of products that improve our quality of life. Remember: science is knowledge and technology is the application of that knowledge for practical purposes.

Applied Research - Generally carried out to solve a problem.





- *Come in tomorrow prepared to teach one of your classmates something. This something can be anything (use your common sense here...)*
  - *If it's something too big or unsafe to bring to school, you can record yourself or just describe it.*
  - *It should be something you are good at!!*