**General Biology Name:**

***Chemistry unit study guide***

**Be familiar with…**

* The function of an atom
* The parts of an atom
* How a periodic table works
* What an element and compound are
* What an isotope and ion are
* How hydrogen, covalent, and ionic bonds are formed
* Why various bonds are formed
* How you can find out which bond is used when
* What polar, nonpolar, and ionic bonds look like
* How are polar and nonpolar bonds formed
* The bonds occurring in water and their significance
* The concept of electronegativity

**Suggested resources…**

Helpful videos:

History of the atom

<http://www.bozemanscience.com/history-of-the-atom>

Atomic nucleus

<http://www.youtube.com/watch?v=FSyAehMdpyI&list=PL8dPuuaLjXtPHzzYuWy6fYEaX9mQQ8oGr>

Electrons

<http://www.youtube.com/watch?v=rcKilE9CdaA&list=PL8dPuuaLjXtPHzzYuWy6fYEaX9mQQ8oGr>

The periodic table

<http://www.bozemanscience.com/atoms-the-periodic-table>

Chemical bonds

<http://www.bozemanscience.com/chemical-bonds-covalent-vs-ionic>

<http://www.youtube.com/watch?v=QXT4OVM4vXI&list=UUX6b17PVsYBQ0ip5gyeme-Q>

Polar and nonpolar molecules

<http://www.youtube.com/watch?v=PVL24HAesnc>

Your course work!

And lastly us! Your teachers

**How to study…**

Don’t wait until the night before or God forbid the morning of to prepare. Eat a good breakfast and get a good night’s sleep before hand. I know it sounds stupid, but it really does make a difference and is only possible if you plan ahead.

Concerning basic facts like what an ionic bond is or where electrons are found, make flash cards. It does take time to make the cards, but it is a great way to put things into your head. Once the cards are made follow these simple steps

1. Start by looking at the question, repeat it to yourself, then look at the answer and repeat that to yourself. Now set the card down and grab the next one.
2. Repeat step one for 3-5 cards. Now pick up those cards read the question out loud and look at the answer, but don’t repeat it out loud.
3. Take the same 3-5 cards and look at the question but don’t say it out loud. Now say the answer without looking.
4. If you get the answer correct put it into one pile, if not put it in a different pile. Repeat steps 1-4 for the ones you did not get correct, do this until you get them all correct.
5. Once you get all 5 cards correct get 3-5 new cards and start the process over, but when you get to step 3 mix in the cards you have already done.
6. Continue until you can do all the cards quickly (about one second per card).

\*This process can be done alone, but it also works really well when you work with a partner that shows you the questions and reads them aloud to you.

When you are preparing for the sections that require you to do a process (solve for a bond or draw an atom) I would practice solving for bonds. I would also race a friend to see who could solve it correctly the fastest or draw and label an atom correctly the fastest.

If you do not understand a topic I would watch the corresponding video or reread the appropriate articles to find the answer. Don’t just watch the videos or skim the articles, take notes, critique what they say, how did it match with what you did in class? I would also look at your lab work and reread the comments I put on your paper(s).

Look over your course work. What problems did you miss? Correct them!

Spend time getting familiar with the periodic table. It is a valuable tool

Practice making models of atoms and bonds

Act as though you have to prove your answer for every study question

Talk to classmates, see were they have trouble, set up a study group