

# TUESDAY, MARCH 5<sup>th</sup>

## DO NOW

• In your notebooks, to be checked, solve this problem...  
There are 2 Oxygen in 1 Carbon Dioxide ( $\text{CO}_2$ ) and 2 Oxygen in 1 Calcium Hydroxide aka  $\text{Ca}(\text{OH})_2$ . These are units of Chemistry!

**Know:**



**Asked:** How many Oxygen Atoms can be found in 19 Molecules of  $\text{Ca}(\text{OH})_2$ ?

## TODAY'S PLAN

1. Do and review the **DO NOW** and **Qualitative Prompt (QP)**!
  - Today's **QP** = Using Pg. 194-199 of your book LIST one property each of Ionic, Covalent, and Metallic Compounds and then SKETCH what you predict would happen if you put ELECTRICAL wires into WATER!
2. Open books, **WORK** on today's **AO**!
3. \***HW** = Demo Down HW Questions!

## TODAY'S ACADEMIC OBJECTIVE

Today you will **SHED** light upon the **PROPERTIES** within Ionic, Covalent, and **METALLIC** Compounds!

## Demo Down – HW Problems and Questions

1. What did you predict would happen when we used the PURE Water, SUGAR, and SALT solutions to try and complete the lightbulb's circuit?
2. *How did your predictions vary from what actually happened? How was this Demo Down also dangerous?*
3. SKETCH the lightbulb apparatus used in this Demo Down and then LIST and LABEL which things involved in today's Demo Down were made with IONIC, COVALENT, and METALLIC Bonds!

# THE SGS - STUDY GUIDE SLIDE – CHEMICAL BONDS QUIZ

- **Students must KNOW:**
  1. What happens when substances undergo Chemical Reactions, what can cause these Reactions, and WHY do certain Elements prefer to react with each other?
  2. What is a Valence Electron? How many Valence Electrons does an Atom need to be “happy”?
  3. How and Why do Atoms become Ions?
  4. What kinds of Elements form Covalent Bonds & which form Ionic Bonds?
  5. How are Chemical Formulas & Reactions written, what are the parts of each, and why/how must Reactions be Balanced?
- **Students must be able to DO:**
  1. Differentiate between the “Bohr Model”, “Electron Cloud”, and “Space-Filling” Models for drawing Atoms
  2. Draw Bohr Models & Lewis Dot Diagrams for Elements in Periods 1-4.
  3. Compare & Contrast Molecules and Compounds.
  4. Predict the number of Valence Electrons, Reactivity, and Properties of an Element based off of its Family/Group Name on the Periodic Table.
  5. Compare & Contrast Ionic, Covalent, and Metallic Bonding/Compounds and the Properties of Each.



# THE SGS - STUDY GUIDE SLIDE - CHEMICAL BONDS QUIZ

## • Students must KNOW:

1. Atoms are rearranged, since bonds are just broken and reformed. Heat, collisions, concentration, and “catalysts” can cause reactions. Endothermic Reactions take in heat, Exothermic ones release it. Elements prefer to react with an Element that will give them 8 Valence Electrons.
2. The outermost Electrons. Atoms need 8 Valence Electrons to be happy aka have a full outermost energy level.
3. By losing or gaining Electrons. Atoms do this to become more stable aka to get 8 Valence Electrons. Neutral Atoms have equal numbers of Protons and Electrons. Ions bonded together make “Ionic Compounds”.
4. Nonmetal + Nonmetal = Covalent. Metal + Nonmetal = Ionic
5. Formulas show a ratio of Atoms. Formulas can have Subscripts (little # after a symbol), Coefficients (big # before a symbol), and Parentheses. Reactions are written to show “Reactant” chemicals on the left turning into “Products” on the right. Reactions are written as Equations, they use Math Symbols, but the “Yield” Arrow ( $\rightarrow$ ) instead of the = sign. Reactions must be balanced due to the Law of Conservation of Energy, and to balance them just add Coefficients before each Atom/Molecule.

## • Students must be able to DO:

1. Bohr shows the Valence Electrons and can help predict how Atoms bond, the Electron Cloud is the most accurate representation of an Atom, and the Space-Filling is good for showing food molecules.
2. See your Jot-Down Notes on drawing Bohr and Lewis Diagrams. Note that both are good for predicting how Atoms will bond.
3. Molecule = Two or more Atoms. Compound = Two or more DIFFERENT Atoms. All Compounds are Molecules, but not vice versa.
4. Group Number can tell you the number of Valence Electrons. Groups 1-2 have 1-2 Valence Electrons, while 13-18 have the Group Number minus 10. Elements will react to get 8 valence Electrons, and whether or not an Element tends to react depends on its number of Valence Electrons (its easier to react if an Element only needs to gain or lose 1 Valence Electrons. Ex: Alkali Metals in Group 1 are very reactive, Noble gases in Group 18 are not).
5. Ionic tend to conduct electricity when dissolved in water. Covalent involve the sharing of Electrons. Metallic are good conductors since the Electrons can move around freely.



# ***WEDNESDAY, MARCH 6<sup>th</sup>***

## **DO NOW**

- In your notebooks, to be checked, solve this problem...

**Know:** Take out your Study Guide Slides (The SGS!)

**Asked:** Take out your Study Guide Slides (The SGS!)

## **TODAY'S PLAN**

1. Do and review the **DO NOW** and **Qualitative Prompt (QP)**!

- Today's **QP** = QP QUIZ PREP = Using your books & our class website, try to ANSWER as many things from EACH side of the SGS as you can and then REDEFINE the term *Law of Conservation of Mass*!

2. Open books, WORK on today's **AO**!

3. \***HW** = Read & Do Pg. 212-215!

## **TODAY'S ACADEMIC OBJECTIVE**

Today you will BEHAVE while Mr. Floyd is at the K'NEX Competition, treat this room with RESPECT, and REVIEW for our upcoming QUIZ!

# THURSDAY, MARCH 7<sup>th</sup>

## DO NOW

**Know:** Various factors can increase the rate of a Chemical Reaction, such as increasing the temperature, amount of reactants, or using a “catalyst”.

**Asked:** Why does increasing temperature usually increase the rate of a reaction?

**A:** It increases the amount of reactant

**B:** It causes particles to go faster/collide more

**C:** It decreases the amount of reactant

## TODAY'S PLAN

1. Do and review the **DO NOW** and **Qualitative Prompt (QP)**!
  - Today's **QP** = Using the Symbols of the Chemical Elements create ONE sentence using words made from the Chemical Symbols and then DEFINE “Chemical Reaction” & “Chemical Equation”!
2. Open books, **WORK** on today's **AO**!
3. \***HW** = Read & Do Pg. 216-217!

## TODAY'S ACADEMIC OBJECTIVE

Today you will begin to **UNWRAP** the nuances of **CHEMICAL EQUATIONS**!

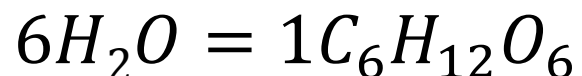


# FRIDAY, MARCH 8<sup>th</sup>

## DO NOW

- In your notebooks, to be checked, solve this problem...  
There are 6 Water (H<sub>2</sub>O) in 1 Glucose (C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>). These are units of Chemistry!

**Know:**



**Asked:** How many molecules of Glucose can be dissolved in 48 Water molecules?

## TODAY'S PLAN

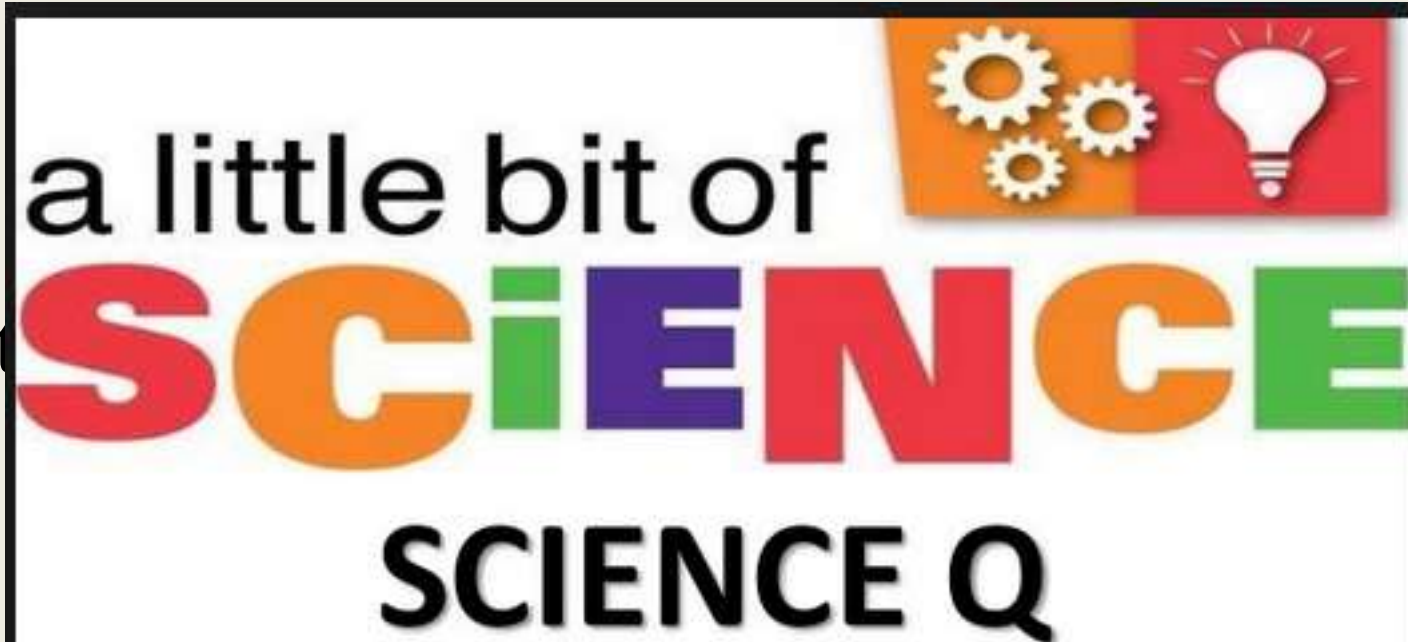
1. Do and review the **DO NOW** and **Qualitative Prompt (QP)**!
  - Today's **QP** = SKETCH what you think takes place when a CHEMICAL REACTION occurs and then LIST 4 things that you think could SPEED UP a Reaction!
2. Open books, **WORK** on today's **AO!**
3. \***HW** = Read & Do Pg. 218-219!

## TODAY'S ACADEMIC OBJECTIVE

Today you will **BALANCE** and **EQUATE** the Elements and Molecules involved in Chemical **REACTIONS!**

# Bell 2 Bell

- We work what in this class?!?!?!
  - **BELL 2 BELL**
- Every single precious **SECOND** of academic instructional time is thus utilized in this classroom!
- You students will thus be vocally quizzed **EVERY DAY** until I **DISMISS** you at the end of class (with a positive greeting and a thank-you of course!).





# Bell 2 Bell

- We work **BELL 2**  
**BELL** in Mr. Floyd's class!
- I will thus quiz you about the science we learned today until the very end!
- Let us begin!

