

AP CHEMISTRY 2018-2019 SUMMER ASSIGNMENT

Welcome to the best AP chemistry class ever! We are going to walk together for several months, and we need very good shoes. In chemistry the shoes are: **names of compounds and chemical formulas**. During the summer, you will master your skills in naming compounds and writing formulas from names. On the very **first day of school you will be tested*** on names and formulas of:

- ionic compounds,
- covalent compounds,
- acids,
- organic compounds (hydrocarbons and functional groups).

I invite all of you to spend a countless number of hours studying. You will find beneficial information on the following links:

<http://www.deltacollege.edu/emp/preedy/Handouts/Nomenclature%20Handout.pdf>

<http://colapret.cm.utexas.edu/courses/organicnomenclature.pdf>

http://butane.chem.uiuc.edu/cyerkes/Chem104A_BFA05/Genchemref/nomenclature_rules.html

Hard copies of the links are available in the main office over the summer.

If you have any questions:

- Refer to the website www.collegeboard.com and search for AP chemistry
- Email me at pietro.doldi@belleville.k12.nj.us
- Ask students who already took the AP Chemistry exam.

Have a safe and peaceful summer! College credits are waiting for you!

WE LOVE CHEMISTRY!!!

Mr. Pietro Doldi

*If you miss the first day of school, you will be tested immediately upon your arrival. If you miss the first month of school, you will be tested within 5 school days upon your arrival.

Summer Assignment
Worksheet 1
Ionic/Covalent Compounds

- 1) copper (II) acetate _____
- 2) sodium hydroxide _____
- 3) lithium oxide _____
- 4) cobalt (III) carbonate _____
- 5) aluminum sulfide _____
- 6) ammonium cyanide _____
- 7) iron (III) phosphide _____
- 8) vanadium (V) phosphate _____
- 9) sodium permanganate _____
- 10) manganese (III) fluoride _____
- 11) beryllium nitrate _____
- 12) nickel (III) sulfite _____
- 13) potassium oxide _____
- 14) silver bromide _____
- 15) zinc phosphate _____
- 16) copper (II) bicarbonate _____
- 17) nickel (II) selenide _____
- 18) manganese (IV) carbonate _____
- 19) lead (IV) nitride _____
- 20) tin (II) hydroxide _____
- 21) lithium arsenide _____
- 22) chromium (VI) sulfate _____
- 23) calcium bromide _____
- 24) ammonium sulfate _____

- 25) copper (II) oxide _____
- 26) platinum (IV) phosphate _____
- 27) aluminum carbonate _____
- 28) silver nitrate _____
- 29) magnesium acetate _____
- 30) nickel (III) cyanide _____
- 31) vanadium (IV) phosphate _____
- 32) silver sulfate _____
- 33) cobalt (III) sulfide _____
- 34) iron (II) sulfite _____
- 35) copper (II) nitrite _____
- 36) nickel (II) hydroxide _____
- 37) zinc nitride _____
- 38) manganese (VII) nitrate _____
- 39) gallium sulfate _____
- 40) sodium nitrate _____

Write chemical formulas for the compounds in each box. The names are found by finding the intersection between the cations and anions. Example: The first box is the intersection between the "zinc" cation and the "chloride" anion, so you should write "ZnCl₂", as shown.

	<i>zinc</i>	<i>iron (II)</i>	<i>iron (III)</i>	<i>gallium</i>	<i>silver</i>	<i>lead (IV)</i>
<i>chloride</i>	ZnCl ₂					
<i>acetate</i>						
<i>nitrate</i>						
<i>oxide</i>						
<i>nitride</i>						
<i>sulfate</i>						

Name the following compounds:

1) CCl_4 _____

2) CO _____

3) S_2O_3 _____

4) SiO_2 _____

5) F_2O _____

6) SO_2 _____

7) PCl_5 _____

8) N_2O_5 _____

9) IF_7 _____

10) Dinitrogen tetraoxide _____

11) Chlorine pentafluoride _____

12) Diphosphorous trioxide _____

Summer Assignment
Worksheet 2
Acids

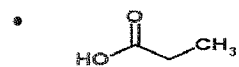
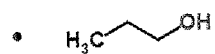
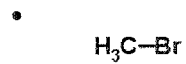
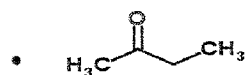
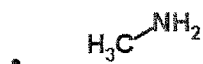
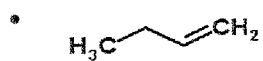
Write the name or the formula of the following acids!

- 1) H_3PO_4
- 2) H_2CO_3
- 3) H_2SO_4
- 4) HIO_3
- 5) HF
- 6) HNO_2
- 7) hydrobromic acid
- 8) hydrocyanic acid
- 9) nitric acid
- 10) sulfurous acid
- 11) phosphorous acid
- 12) acetic acid
- 13) HCl
- 14) HClO_4
- 15) HOCl
- 16) $\text{H}_2\text{C}_2\text{O}_7$
- 17) H_2CO_3
- 18) Benzoic acid
- 19) Carbonic acid
- 20) HCN

Summer Assignment
Worksheet 3
Organic Chemistry

Name the following compounds.

- CH_4
- C_4H_{10}
- CH_3COCH_3
- $\text{CH}_3\text{C}_6\text{H}_5$
- C_2H_2
- $\text{C}_2\text{H}_5\text{OH}$
- C_7H_{16}
- C_9H_{20}



Write the formulas for the following (Draw if necessary):

- 2-hexene
- 1-pentyne
- 2-propanol
- propanal
- cyclohexanone
- dimethylamine
- 2-methyl butanoic acid
- ethyl methyl ether
- 1,3- dichlorobenzene

6. Draw:

- 2,2 dimethyl pentane
- 3,3,4 trimethyl hexane
- 4-octyne

