

AP Chemistry Summer Assignment
For the 2017-2018 School Year
Mrs. Lovel

AP Chemistry students are expected to address certain selected topics independently during the summer in preparation for the class. Your summer assignment consists of the following: *1.) you will learn the symbols for 80 elements (see page 2,3) and learn the 35 polyatomic ions (see page 4) and their formulas, and charges, and 2.) take a test over the elements and their symbols and take a test over the polyatomic ions and their formulas and charges during the first week of school.*

The requirements for enrollment in AP Chemistry include making a minimum grade of 70 on elements/symbols test and making a minimum grade of 70 on polyatomic ions/formulas and charges test. These tests will be major grades. You will be tested over the elements and their symbols (not their atomic numbers) and the polyatomic ions, during the first week of school (but not the first or second day you return to school). On these tests the student will be given the element's name and asked to correctly write its symbol **or** may be given the symbol and asked to write the name of the element. For the polyatomic ions, the student will be given the polyatomic ion's formula (symbols, numerical subscript) and charge, and asked to write its name **or** may be given the name and asked to write its formula (symbols, numerical subscript) and charge. Names must be spelled correctly to receive full credit on the exam.

If you have any questions about your summer assignment you may email me at lovelj@needvilleisd.com . I will check my email during the summer. If you want me to call you back, please leave a phone number. I look forward to having you in class next year!

Atomic Numbers, Elements, and Symbols

<u>Atomic Number</u>	<u>Symbol</u>	<u>Name</u>
1	H	Hydrogen
2	He	Helium
3	Li	Lithium
4	Be	Beryllium
5	B	Boron
6	C	Carbon
7	N	Nitrogen
8	O	Oxygen
9	F	Fluorine
10	Ne	Neon
11	Na	Sodium
12	Mg	Magnesium
13	Al	Aluminum
14	Si	Silicon
15	P	Phosphorus
16	S	Sulfur
17	Cl	Chlorine
18	Ar	Argon
19	K	Potassium
20	Ca	Calcium
21	Sc	Scandium
22	Ti	Titanium
23	V	Vanadium
24	Cr	Chromium
25	Mn	Manganese
26	Fe	Iron
27	Co	Cobalt
28	Ni	Nickel
29	Cu	Copper
30	Zn	Zinc
31	Ga	Gallium
32	Ge	Germanium
33	As	Arsenic
34	Se	Selenium
35	Br	Bromine
36	Kr	Krypton
37	Rb	Rubidium
38	Sr	Strontium
39	Y	Yttrium

40	Zr	Zirconium
41	Nb	Niobium
42	Mo	Molybdenum
43	Tc	Technetium
44	Ru	Ruthenium
45	Rh	Rhodium
46	Pd	Palladium
47	Ag	Silver
48	Cd	Cadmium
49	In	Indium
50	Sn	Tin
51	Sb	Antimony
52	Te	Tellurium
53	I	Iodine
54	Xe	Xenon
55	Cs	Cesium
56	Ba	Barium
57	La	Lanthanum
58	Ce	Cerium
59	Pr	Praseodymium
60	Nd	Neodymium
61	Pm	Promethium
62	Sm	Samarium
63	Eu	Europium
64	Gd	Gadolinium
65	Tb	Terbium
66	Dy	Dysprosium
67	Ho	Holmium
68	Er	Erbium
69	Tm	Thulium
70	Yb	Ytterbium
71	Lu	Lutetium
72	Hf	Hafnium
73	Ta	Tantalum
74	W	Tungsten
75	Re	Rhenium
76	Os	Osmium
77	Ir	Iridium
78	Pt	Platinum
79	Au	Gold
80	Hg	Mercury

POLYATOMIC IONS

<u>Name</u>	<u>Formula & Charge</u>
1. Ammonium	NH_4^{+1}
2. Acetate	$\text{C}_2\text{H}_3\text{O}_2^{-1}$
3. Carbonate	CO_3^{-2}
4. Bicarbonate	HCO_3^{-1} (This polyatomic ion is also known as hydrogen carbonate)
5. Chromate	CrO_4^{-2}
6. Dichromate	$\text{Cr}_2\text{O}_7^{-2}$
7. Cyanide	CN^{-1}
8. Hydroxide	OH^{-1}
9. Hydronium	H_3O^{+1}
10. Nitrate	NO_3^{-1}
11. Nitrite	NO_2^{-1}
12. Sulfate	SO_4^{-2}
13. Sulfite	SO_3^{-2}
14. Oxalate	$\text{C}_2\text{O}_4^{-2}$
15. Permanganate	MnO_4^{-1}
16. Phosphate	PO_4^{-3}
17. Perchlorate	ClO_4^{-1}
18. Chlorate	ClO_3^{-1}
19. Chlorite	ClO_2^{-1}
20. Hypochlorite	ClO^{-1}
21. Hydrogen Phosphate	HPO_4^{-2}
22. Thiosulfate	$\text{S}_2\text{O}_3^{-2}$
23. Peroxide	O_2^{-2}
24. Dihydrogen Phosphate	$\text{H}_2\text{PO}_4^{-1}$
25. Arsenate	AsO_4^{-3}
26. Thiocyanate	SCN^{-1}
27. Silicate	SiO_3^{-2}
28. Selenate	SeO_4^{-2}
29. Diphosphate	$\text{P}_2\text{O}_7^{-4}$
30. Amide	NH_2^{-1}
31. Azide	N_3^{-1}
32. Tartrate	$\text{C}_4\text{H}_4\text{O}_6^{-2}$
33. Hydrogen Sulfate	HSO_4^{-1} (This polyatomic ion is also known as bisulfate)
34. Molybdate	MoO_4^{-2}
35. Bromate	BrO_3^{-1}