

AP Chemistry Summer Assignment
For the 2018-2019 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 100 elements (see page 2) and learn the 35 polyatomic ions (see page 3) 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, Symbols, and Elements

1 - H - <u>Hydrogen</u>	35 - Br - Bromine	69 - Tm - Thulium
2 - He - Helium	36 - Kr - Krypton	70 - Yb - Ytterbium
3 - Li - Lithium	37 - Rb - Rubidium	71 - Lu - Lutetium
4 - Be - Beryllium	38 - Sr - Strontium	72 - Hf - Hafnium
5 - B - Boron	39 - Y - Yttrium	73 - Ta - Tantalum
6 - C - Carbon	40 - Zr - Zirconium	74 - W - Tungsten
7 - N - Nitrogen	41 - Nb - Niobium	75 - Re - Rhenium
8 - O - Oxygen	42 - Mo - Molybdenum	76 - Os - Osmium
9 - F - Fluorine	43 - Tc - Technetium	77 - Ir - Iridium
10 - Ne - Neon	44 - Ru - Ruthenium	78 - Pt - Platinum
11 - Na - Sodium	45 - Rh - Rhodium	79 - Au - Gold
12 - Mg - Magnesium	46 - Pd - Palladium	80 - Hg - Mercury
13 - Al - Aluminum	47 - Ag - Silver	81 - Tl - Thallium
14 - Si - Silicon	48 - Cd - Cadmium	82 - Pb - Lead
15 - P - Phosphorus	49 - In - Indium	83 - Bi - Bismuth
16 - S - Sulfur	50 - Sn - Tin	84 - Po - Polonium
17 - Cl - Chlorine	51 - Sb - Antimony	85 - At - Astatine
18 - Ar - Argon	52 - Te - Tellurium	86 - Rn - Radon
19 - K - Potassium	53 - I - Iodine	87 - Fr - Francium
20 - Ca - Calcium	54 - Xe - Xenon	88 - Ra - Radium
21 - Sc - Scandium	55 - Cs - Cesium	89 - Ac - Actinium
22 - Ti - Titanium	56 - Ba - Barium	90 - Th - Thorium
23 - V - Vanadium	57 - La - Lanthanum	91 - Pa - Protactinium
24 - Cr - Chromium	58 - Ce - Cerium	92 - U - Uranium
25 - Mn - Manganese	59 - Pr - Praseodymium	93 - Np - Neptunium
26 - Fe - Iron	60 - Nd - Neodymium	94 - Pu - Plutonium
27 - Co - Cobalt	61 - Pm - Promethium	95 - Am - Americium
28 - Ni - Nickel	62 - Sm - Samarium	96 - Cm - Curium
29 - Cu - Copper	63 - Eu - Europium	97 - Bk - Berkelium
30 - Zn - Zinc	64 - Gd - Gadolinium	98 - Cf - <u>Californium</u>
31 - Ga - Gallium	65 - Tb - Terbium	99 - Es - Einsteinium
32 - Ge - Germanium	66 - Dy - Dysprosium	100 - Fm - Fermium
33 - As - Arsenic	67 - Ho - <u>Holmium</u>	
34 - Se - Selenium	68 - Er - Erbium	

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. Phosphite	PO_3^{-3}