

Honors Physical Science Summer Assignment 2018/2019

webelements.com

Due: 1st day of School

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For your assignment you will explore the first 20 elements plus 16 others on the periodic table using webelements.com. You will have a quiz on the elements the first week of school, elements & symbols only. You will need to know the elemental name and symbol for the 36 listed elements.

hydrogen 1 H 1.0079																	helium 2 He 4.0026						
lithium 3 Li 6.941	beryllium 4 Be 9.0122																	boron 5 B 10.811	carbon 6 C 12.011	nitrogen 7 N 14.007	oxygen 8 O 15.999	fluorine 9 F 18.998	neon 10 Ne 20.180
sodium 11 Na 22.990	magnesium 12 Mg 24.305																	aluminum 13 Al 26.982	silicon 14 Si 28.086	phosphorus 15 P 30.974	sulfur 16 S 32.065	chlorine 17 Cl 35.453	argon 18 Ar 39.948
potassium 19 K 39.098	calcium 20 Ca 40.078	scandium 21 Sc 44.956	titanium 22 Ti 47.867	vanadium 23 V 50.942	chromium 24 Cr 51.996	manganese 25 Mn 54.938	iron 26 Fe 55.845	cobalt 27 Co 58.933	nickel 28 Ni 58.693	copper 29 Cu 63.546	zinc 30 Zn 65.39	gallium 31 Ga 69.723	germanium 32 Ge 72.61	arsenic 33 As 74.922	selecnium 34 Se 78.96	bromine 35 Br 79.904	krypton 36 Kr 83.80						
rubidium 37 Rb 85.468	strontium 38 Sr 87.62	yttrium 39 Y 88.906	zirconium 40 Zr 91.224	niobium 41 Nb 92.906	molybdenum 42 Mo 95.94	technetium 43 Tc [98]	ruthenium 44 Ru 101.07	rhodium 45 Rh 102.91	palladium 46 Pd 106.42	silver 47 Ag 107.87	cadmium 48 Cd 112.41	indium 49 In 114.82	tin 50 Sn 118.71	antimony 51 Sb 121.76	tellurium 52 Te 127.60	iodine 53 I 126.90	xenon 54 Xe 131.29						
caesium 55 Cs 132.91	barium 56 Ba 137.33	57-70 * lanthanum 71 Lu 174.97	hafnium 72 Hf 178.49	tantalum 73 Ta 180.95	tungsten 74 W 183.84	rhenium 75 Re 186.21	osmium 76 Os 190.23	iridium 77 Ir 192.22	platinum 78 Pt 195.08	gold 79 Au 196.97	mercury 80 Hg 200.59	thallium 81 Tl 204.38	lead 82 Pb 207.2	bismuth 83 Bi 208.98	polonium 84 Po [209]	astatine 85 At [210]	radon 86 Rn [222]						
francium 87 Fr [223]	radium 88 Ra [226]	89-102 * * actinium 103 Lr [227]	rutherfordium 104 Rf [261]	dubnium 105 Db [262]	seaborgium 106 Sg [266]	bohrium 107 Bh [264]	hassium 108 Hs [269]	meitnerium 109 Mt [268]	unnilium 110 Uun [271]	ununium 111 Uuu [272]	unbibium 112 Uub [277]	unquadrium 114 Uuq [289]											

* Lanthanide series

lanthanum 57 La 138.91	cerium 58 Ce 140.12	praseodymium 59 Pr 140.91	neodymium 60 Nd 144.24	promethium 61 Pm [145]	samarium 62 Sm 150.36	europium 63 Eu 151.96	gadolinium 64 Gd 157.25	terbium 65 Tb 158.93	dysprosium 66 Dy 162.50	holmium 67 Ho 164.93	erbium 68 Er 167.26	thulium 69 Tm 168.93	ytterbium 70 Yb 173.04
actinium 89 Ac [227]	thorium 90 Th 232.04	protactinium 91 Pa 231.04	uranium 92 U 238.03	neptunium 93 Np [237]	plutonium 94 Pu [244]	americium 95 Am [243]	curium 96 Cm [247]	berkelium 97 Bk [247]	californium 98 Cf [251]	einsteinium 99 Es [252]	fermium 100 Fm [257]	mendelevium 101 Md [258]	nobelium 102 No [259]

** Actinide series

- Go to <http://www.webelements.com>
- You need to make 36 flashcards of the **first 20 elements plus, Hg, Zn, Ni, Pb, Ag, Au, I, Fe, Cu, Br, Sn, Co, Ti, Kr, Rn, Cs** on the periodic table starting with hydrogen (H atomic number 1) and ending with calcium (Ca atomic number 20). By searching the site you will be able to find all the information you need for each flashcard. You can only use the web elements site.
- The tabs you will need to use on the site are "the essentials," "uses," "chemistry," and "compound properties." You can click on an element under this tab and explore the important information.
- Each flashcard must include the following information.
 - Element Symbol (on front of card)
 - Element Name (on back of card)
 - Element Number (on back of card)
 - Element Atomic mass (on back of card)

- Description of physical properties of the element (on back of card)
 - Is it a solid, liquid or gas at room temperature
 - It is a metal and non-metal or a metalloid
- An example of the elements use. How the element is useful – for example, what is produced from this element, how is the element used in consumer or industrial products. (on back of card)

You must hand your 36 flashcards and your signed syllabus in on the first day of school for credit. Late assignments ARE NOT accepted!

If you do not have a computer at home, please use the public library. Please contact me if you have further questions.

Honors Physical Science Summer Assignment Grading Rubric 2018/2019

Category	25	15	10	5	Score
Accuracy of Information	Information is accurate and all parts are included for all 36 elements	Information is mostly accurate and all parts are include for all 36 elements	Information is somewhat accurate and most parts are included for most of the 36 elements	Information is not accurate and not all parts are included for the 36 elements. Some elements may be missing	
Presentation	Professional looking. Organized & typed or neatly handwritten in pen or typed	Presentable and organized, but not neatly handwritten and / or in pencil	Somewhat unpresentable and organized with not neat handwriting	Unpresentable. Unorganized and handwriting is undecipherable	

If you have any questions, please contact me at johnja@wapak.org

Enjoy your summer!