

Biology

Name: _____

Review questions from modeling activity

Date: _____ Hour: _____

1. Looking at your data from yesterday's activity, what color were each of the following elements?

Oxygen: _____

Hydrogen: _____

Sodium: _____

Chlorine: _____

Carbon: _____

Magnesium: _____

Nitrogen: _____

Use the periodic table below to answer the following question:

Periodic Table of the Elements																				
Atomic Number	Symbol	Name	Atomic Mass	Atomic Number	Symbol	Name	Atomic Mass	Atomic Number	Symbol	Name	Atomic Mass	Atomic Number	Symbol	Name	Atomic Mass	Atomic Number	Symbol	Name		
1	H	Hydrogen	1.008	2	He	Helium	4.003	13	B	Boron	10.811	14	C	Carbon	12.011	15	N	Nitrogen	14.007	
3	Li	Lithium	6.941	4	Be	Boron	9.012	5	B	Boron	10.811	6	C	Carbon	12.011	7	O	Oxygen	15.999	
11	Na	Sodium	22.990	12	Mg	Magnesium	24.305	13	Al	Aluminum	26.982	14	Si	Silicon	28.086	15	P	Phosphorus	30.974	
19	K	Potassium	39.098	20	Ca	Calcium	40.078	21	Sc	Scandium	44.956	22	Ti	Titanium	47.88	23	V	Vanadium	50.942	
37	Rb	Rubidium	84.400	38	Sr	Sr	87.62	39	Y	Yttrium	88.905	40	Ti	Titanium	47.88	24	Cr	Chromium	51.996	
55	Cs	Cesium	130.905	56	Ba	Barium	137.327	57	71	Hf	Hafnium	178.49	72	Ta	Tantalum	180.948	73	W	Tungsten	183.85
87	Fr	Radium	226.029	88	Ra	Radium	226.025	89-103	104	Rf	Rutherfordium	[261]	105	Db	Dubnium	[262]	106	Sg	Seaborgium	[263]
Lanthanide Series																				
57	La	Lanthanum	138.906	58	Ce	Cerium	140.115	59	Pr	Praseodymium	140.905	60	Nd	Neodymium	144.24	61	Pm	Promethium	144.913	
89	Ac	Actinium	227.028	90	Th	Thorium	232.038	91	Pa	Protactinium	231.036	92	U	Uranium	238.029	93	Np	Neptunium	237.048	
Actinide Series																				
Alkali Metal		Alkaline Earth		Transition Metal		Basic Metal		Semimetal		Nonmetal		Halogen		Noble Gas		Lanthanide				
																Actinide				

(from How to Use a Periodic Table www.scienceNotes.org)

2. Elements on the left side of the dark line are called metals. Elements on the right side of the line are called nonmetals. Knowing this, what type of element combination name each of the compounds in the lab?

Example: Li₂S: metal + nonmetal

H₂O: _____ NaCl: _____

MgCl₂: _____ CH₄: _____

CO₂: _____ NH₃: _____

3. Using your answers from #2 and your notes on the type of bond formed, what can you say about the type of elements that make an ionic or covalent bond?

4. Use your answers from the above questions and the periodic table to predict the type of bond formed between the following elements:

a) Calcium and iodine: _____

b) phosphorus and oxygen: _____

c) potassium and nitrogen: _____

d) carbon and chlorine: _____

e) lithium and sulfur: _____