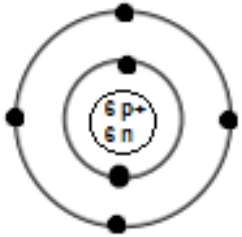
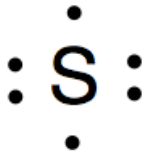
Lewis Dot Diagram Worksheet

Use the Bohr models to determine the number of valance electrons. Once you have found the number of valance electrons, place them around the elements symbol.

Element	Atomic #	Atomic Mass	Protons	Neutrons	Electrons	Valance Electrons	Number of energy levels	Bohr Model	Lewis Dot
Carbon	6	12	6	6	6	4 (group 14, 4 in the ones palace)	2 (2nd period)		·C·
Hydrogen	1	1	1	0					H
Lithium	3	7	3		3				Li

Element	Atomic #	Atomic Mass	Protons	Neutrons	Electrons	Valance Electrons	Number of energy levels	Bohr Model	Lewis Dot
Magnesium	12	24	12	12					Mg
Boron	5	11	5		5				B
Helium	2	4		2	2				He
Oxygen	8	16	8		8				O

Making Ions – Remember that atoms want a filled outer orbital to be in the most stable state. *Complete the chart below showing what happens for each of the atoms to become an ion*.

Element	Lewis Dot	# of Valance e-	Cation or anion?	Gain/Lose ___ e-	Draw ion	Name of ion
Na		1	Cation	Loses 1	Na^{+1}	Sodium ion
S		7	Anion	Gains 2	S^{-2}	Sulf**ide**
Cl						
Be						
Al						
Ne						
K						
N						
O						
Ca						
P						
B						

PERIODIC TABLE ELEMENTS

HYDROGEN 1 H·							HELIUM 2 He·
LITHIUM 3 Li·	BERRYLLIUM 4 ·Be·	BORON 5 ·B·	CARBON 6 ·C·	NITROGEN 7 ·N:	OXYGEN 8 ·O:	FLOURINE 9 :F:	NEON 10 :Ne:
SODIUM 11 Na·	MAGNESIUM 12 ·Mg·	ALUMINUM 13 ·Al·	SILICON 14 ·Si·	PHOSPHORUS 15 ·P:	SULFUR 16 ·S:	CHLORINE 17 :Cl:	ARGON 18 :Ar:

Describe the pattern of the Lewis dot structures of the first 18 elements

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How could you use this pattern to predict how the element may behave in a chemical reaction? _____

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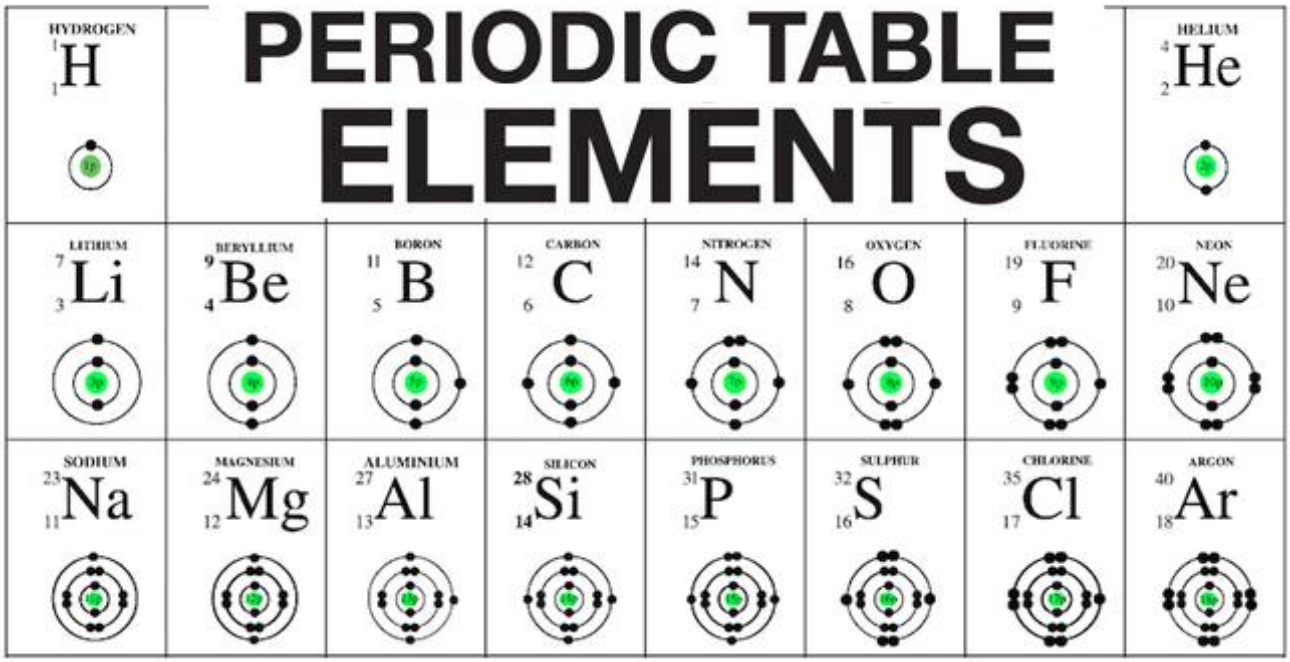

Describe the pattern of the Lewis dot structures of the first 18 elements (include periods and groups/families)?

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How could you use this pattern to predict how the element may behave in a chemical reaction? _____

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