Analysis Activity

ION FORMATION

Directions:

Name: _____

1. Log into Collisions and navigate to the Ions Game.
2. Play the Tutorial levels, if you haven't done so already.
3. Exit the levels and enter the Ions Sandbox. 
4. Ionize each atom listed in the table below and record the requested information.

	Li	Be	B	N	O	F	Na	Mg	Al

STEP 1: Drag the atom into the workspace and record the following information.

# of protons	3								
# of electrons	3								

STEP 2: Form an ion by adding or removing electrons. When you think you have created an ion, hit the CHECK button. If correct, the ion will move into the complete area. Once you have successfully created the ion, drag it from the complete area back into the workspace to record the following information.

# of LOST or GAINED electrons	1 lost								
# of electrons in ions	2								
Ion charge	+1								
Amount of energy USED or RELEASED?	6 units used								
Did the radius increase or decrease?	decrease								

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collisions™

	P	S	Cl	K	Ca	As	Se	Br

STEP 1: Drag the atom into the workspace and record the following information.

# of protons								
# of electrons								

STEP 2: Form an ion by adding or removing electrons. When you think you have created an ion, hit the CHECK button. If correct, the ion will move into the complete area. Once you have successfully created the ion, drag it from the complete area back into the workspace to record the following information.

# of LOST or GAINED electrons								
# of electrons in ions								
Ion charge								
Amount of energy USED or RELEASED?								
Did the radius increase or decrease?								

Analysis Questions:

1. Look at your recorded energy used and released. Write a summary of your observations below.

2. Look at your recorded radius increase or decrease. Write a summary of your observations below.

3. On a separate sheet of paper, create a graph of atomic number vs. energy used for all positive ions above.