


IONIC COMPOUNDS

Name: _____

Directions:

1. Log into Collisions and navigate to the Ionic Bonding Game.
2. Play the Tutorial Levels, if you haven't do so already.
3. Exit the levels and enter the Ionic Bonding Sandbox. 
4. Build each compound listed in the table below and record the requested information.

STEP 1: Determine the cation and anion in each compound below and record the name below.

	sodium chloride	lithium fluoride	aluminum nitride	calcium chloride	magnesium sulfide	potassium oxide
Cation symbol and charge	Na ⁺					
Anion symbol and charge	Cl ⁻					

STEP 2: Build each compound in the Ionic Bonding Sandbox and determine the information below.

	sodium chloride	lithium fluoride	aluminum nitride	calcium chloride	magnesium sulfide	potassium oxide
Compound formula	NaCl					
Cation-to-Anion Ratio	1:1					
Total Positive Charge	Na ⁺ × 1 = +1					
Total Negative Charge	Cl ⁻ × 1 = -1					

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STEP 1: Determine the cation and anion in each compound below and record the name below.

	sodium carbonate	lithium hydroxide	copper(II) hydroxide	lithium phosphate	iron(II) nitride	aluminum sulfate
Cation symbol and charge						
Anion symbol and charge						

STEP 2: Build each compound in the Ionic Bonding Sandbox and determine the information below.

	sodium carbonate	lithium hydroxide	copper(II) hydroxide	lithium phosphate	iron(II) nitride	aluminum sulfate
Compound formula						
Cation-to-Anion Ratio						
Total Positive Charge						
Total Negative Charge						

Analysis Questions:

1. What is the overall charge of an ionic compound?
2. What is the difference between a 1:3 cation-to-anion ratio and a 3:1 cation-to-anion ratio?