Name: _____

Collisions Username: _____

Class: _____

Ionic Bonding Quest

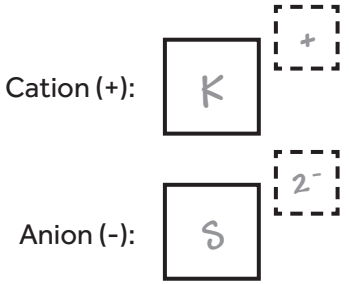
Complete this quest using the Challenge Levels 3, 5 - 10 and the Connected Levels in the Ionic Bonding Game.

MISSION 1. GATHER YOUR INTEL

Use your Collisions gameplay experience to gather the following intel from specific Ionic Bonding levels:

1. Determine the cation in the target.
   a. Label the element symbol(s) in the large square.
   b. Write the charge in the smaller, dashed box.
2. Determine the anion in the target.
   a. Label the element symbol(s) in the large square.
   b. Write the charge in the smaller, dashed box.

Sample Target



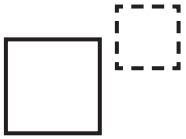
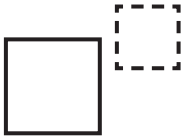
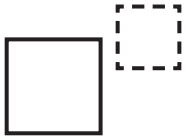
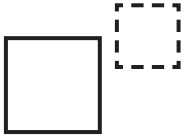
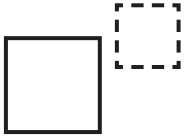
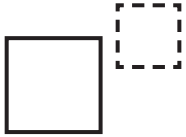
MISSION 2. EXPOSE THE DETAILS

Use your expertise to expose the following information for each target.

	Sample Target
Chemical Formula	K_2S
Compound Name	Potassium Sulfide
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses 1 electron. Each anion gains 2 electrons.
Formula Mass (g/mol)	110.27 g/mol

Ionic Bonding - Challenge Level 3

MISSION 1. GATHER YOUR INTEL

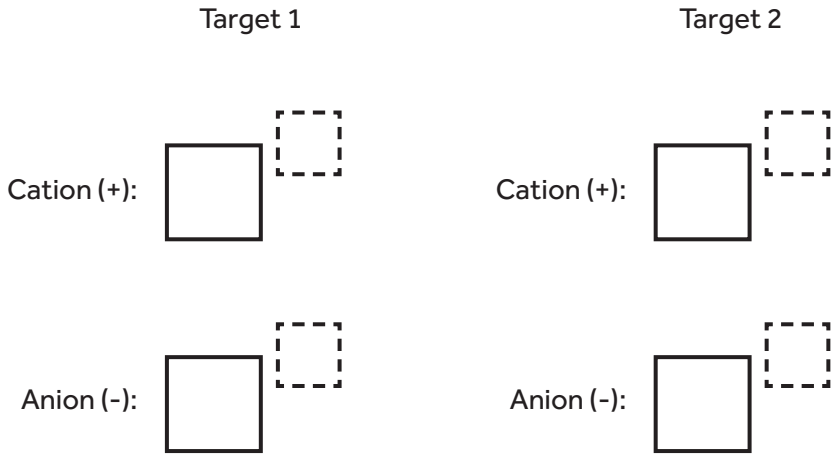
Target 1	Target 2	Target 3
Cation (+): 	Cation (+): 	Cation (+): 
Anion (-): 	Anion (-): 	Anion (-): 

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Compound Name			
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)			

Ionic Bonding - Challenge Level 5

MISSION 1. GATHER YOUR INTEL



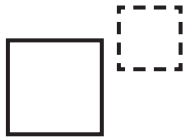
MISSION 2. EXPOSE THE DETAILS

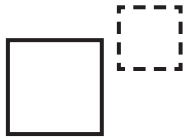
	Target 1	Target 2
Chemical Formula		
Compound Name		
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)		

Ionic Bonding - Challenge Level 6

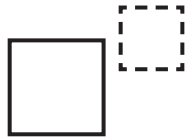
MISSION 1. GATHER YOUR INTEL

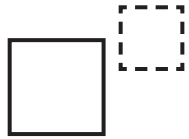
Target 2

Cation (+): 

Anion (-): 

Target 3

Cation (+): 

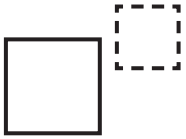
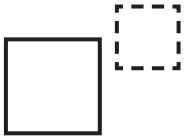
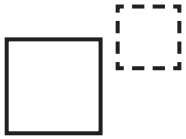
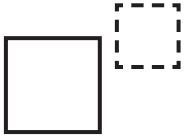
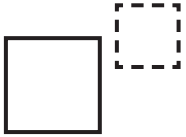
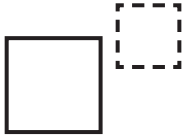
Anion (-): 

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2
Chemical Formula		
Compound Name		
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)		

Ionic Bonding - Challenge Level 7

MISSION 1. GATHER YOUR INTEL

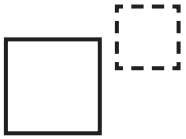
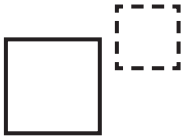
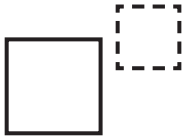
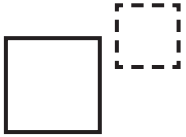
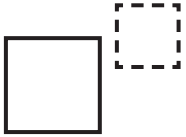
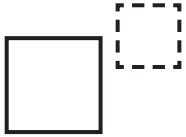
Target 1	Target 2	Target 3
Cation (+): 	Cation (+): 	Cation (+): 
Anion (-): 	Anion (-): 	Anion (-): 

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Compound Name			
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)			

Ionic Bonding - Challenge Level 8

MISSION 1. GATHER YOUR INTEL

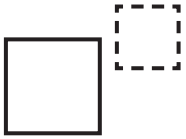
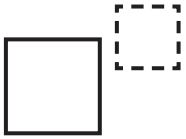
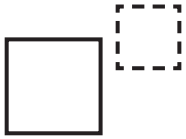
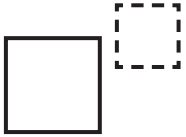
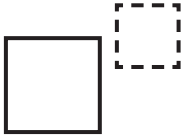
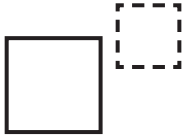
Target 1	Target 2	Target 3
Cation (+): 	Cation (+): 	Cation (+): 
Anion (-): 	Anion (-): 	Anion (-): 

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Compound Name			
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)			

Ionic Bonding - Challenge Level 9

MISSION 1. GATHER YOUR INTEL

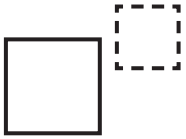
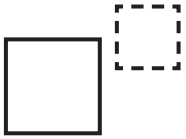
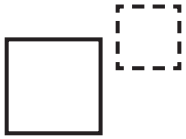
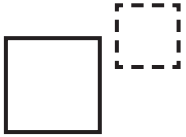
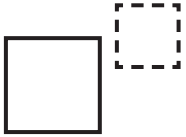
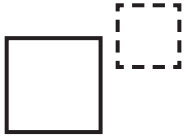
Target 1	Target 2	Target 3
Cation (+): 	Cation (+): 	Cation (+): 
Anion (-): 	Anion (-): 	Anion (-): 

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Compound Name			
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)			

Ionic Bonding - Challenge Level 10

MISSION 1. GATHER YOUR INTEL

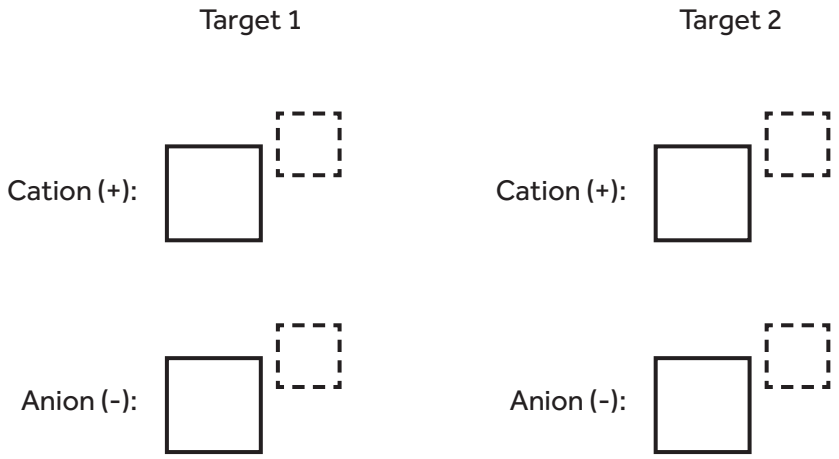
Target 1	Target 2	Target 3
Cation (+): 	Cation (+): 	Cation (+): 
Anion (-): 	Anion (-): 	Anion (-): 

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Compound Name			
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)			

Ionic Bonding and Ions - Connected Level 1

MISSION 1. GATHER YOUR INTEL

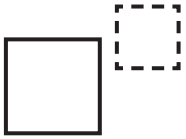
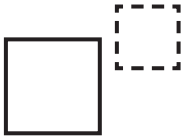
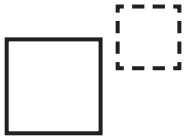
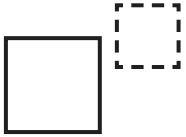
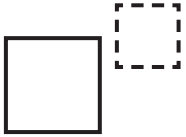
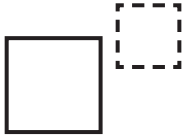


MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2
Chemical Formula		
Compound Name		
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)		

Ionic Bonding and Ions - Connected Level 2

MISSION 1. GATHER YOUR INTEL

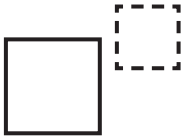
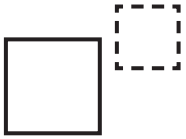
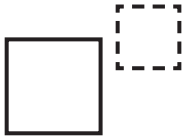
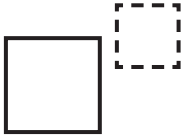
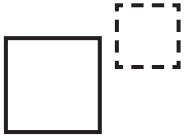
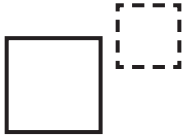
Target 1	Target 2	Target 3
Cation (+): 	Cation (+): 	Cation (+): 
Anion (-): 	Anion (-): 	Anion (-): 

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Compound Name			
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)			

Ionic Bonding and Ions - Connected Level 3

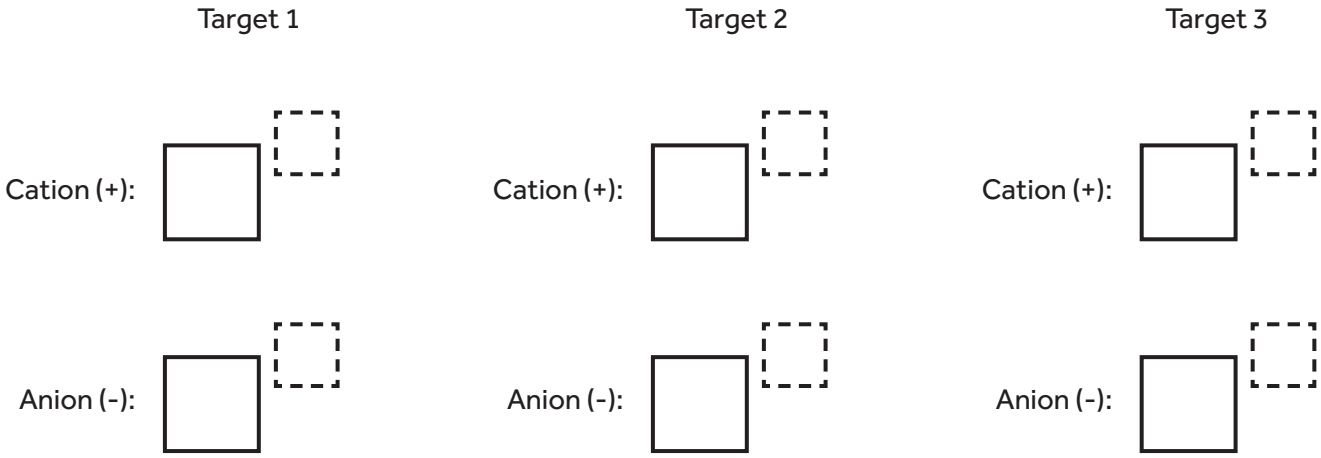
MISSION 1. GATHER YOUR INTEL

Target 1	Target 2	Target 3
Cation (+): 	Cation (+): 	Cation (+): 
Anion (-): 	Anion (-): 	Anion (-): 

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Compound Name			
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)			

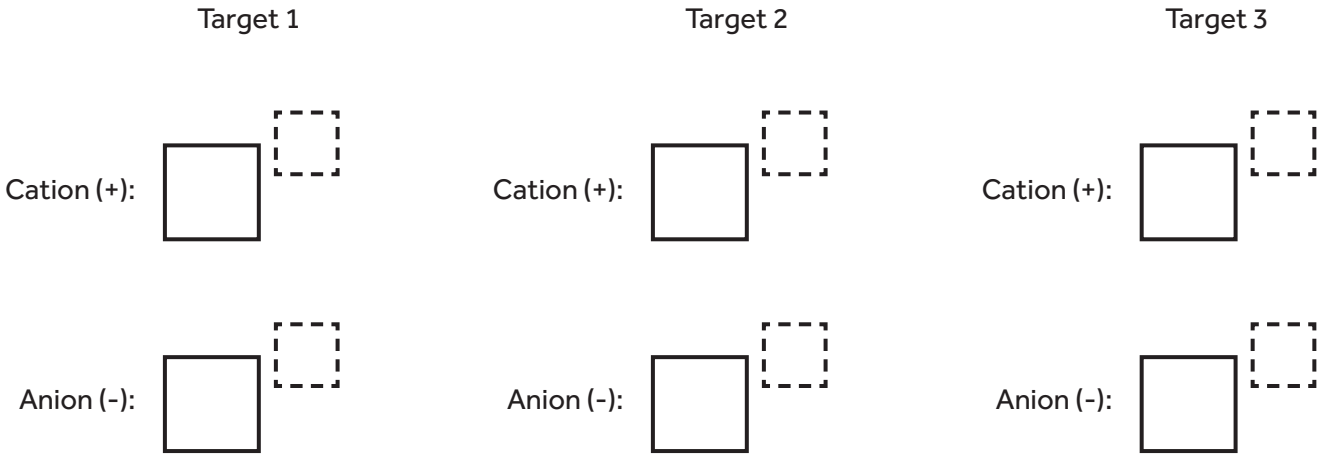
MISSION 1. GATHER YOUR INTEL



MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Compound Name			
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)			

MISSION 1. GATHER YOUR INTEL

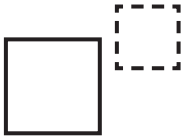
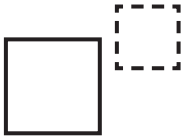
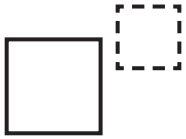
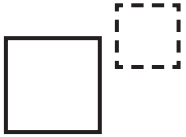
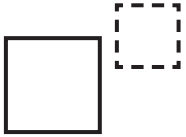
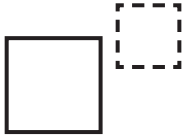


MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Compound Name			
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)			

Ionic Bonding and Acids & Bases - Connected Level 3

MISSION 1. GATHER YOUR INTEL

	Target 1	Target 2	Target 3
Cation (+):			
Anion (-):			

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Compound Name			
Indicate the number of electrons lost and gained by each of the atoms in the compound.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.	Each cation loses _____ electrons. Each anion gains _____ electrons.
Formula Mass (g/mol)			