Name: _____

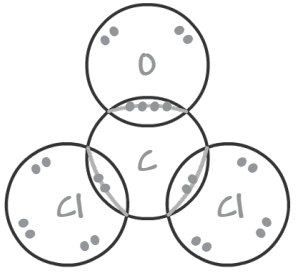
Collisions Username: _____

Class: _____

Covalent Bonding Quest

Complete this quest using the Challenge Levels 4, 6, 8 - 10 , 11 - 17, and the Connected Levels in the Covalent Bonding game.

Sample Target



# of Bond Types:
_1_ Single
_2_ Double
___ Triple

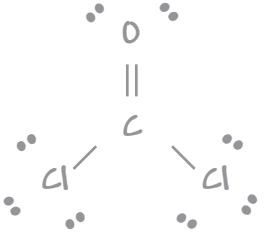
MISSION 1. GATHER YOUR INTEL

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

1. Label each atom of the molecule with the correct element symbol.
2. Draw in each electron on the molecule.
3. List how many bond types (single, double, and triple)

MISSION 2. EXPOSE THE DETAILS

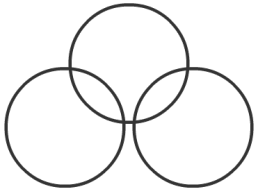
Use your expertise to expose the following information for each target molecule.

	Sample Target
Chemical Formula	$COCl_2$
Molecular Name	Phosgene
Lewis Structure	
Molecular Shape	Trigonal Planar
Bond Angle	120°
Formula Mass (g/mol)	98.91g/mol

Covalent Bonding - Challenge Level 4

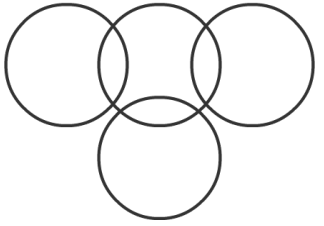
MISSION 1. GATHER YOUR INTEL

Target 1



# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



# of Bond Types:
___ Single
___ Double
___ Triple

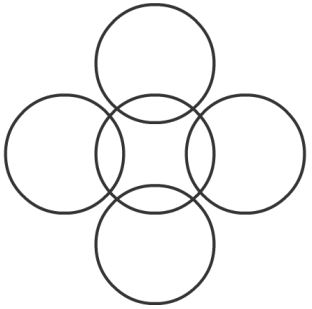
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2
Chemical Formula		
Molecular Name		
Lewis Structure		
Molecular Shape		
Bond Angle		

Covalent Bonding - Challenge Level 6

MISSION 1. GATHER YOUR INTEL

Target 1



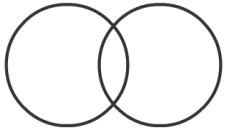
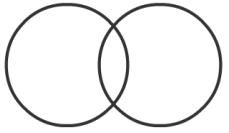
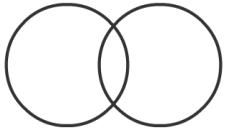
# of Bond Types:
___ Single
___ Double
___ Triple

MISSION 2. EXPOSE THE DETAILS

	Target 1
Chemical Formula	
Molecular Name	
Lewis Structure	
Molecular Shape	
Bond Angle	
Formula Mass (g/mol)	

Covalent Bonding - Challenge Level 8

MISSION 1. GATHER YOUR INTEL

Target 1	Target 2	Target 3
		
# of Bond Types: ___ Single ___ Double ___ Triple	# of Bond Types: ___ Single ___ Double ___ Triple	# of Bond Types: ___ Single ___ Double ___ Triple

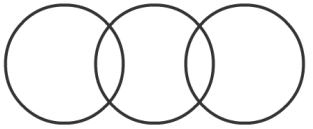
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Molecular Name			
Lewis Structure			
Molecular Shape			
Bond Angle			
Formula Mass (g/mol)			

Covalent Bonding - Challenge Level 9

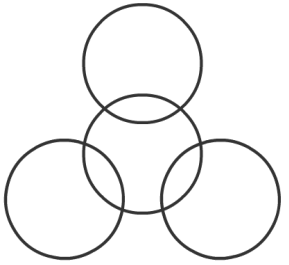
MISSION 1. GATHER YOUR INTEL

Target 1



# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



# of Bond Types:
___ Single
___ Double
___ Triple

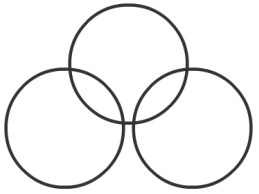
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2
Chemical Formula		
Molecular Name		
Lewis Structure		
Molecular Shape		
Bond Angle		
Formula Mass (g/mol)		

Covalent Bonding - Challenge Level 10

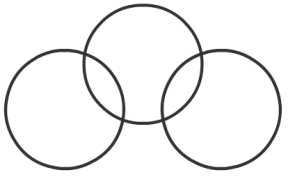
MISSION 1. GATHER YOUR INTEL

Target 1



# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



# of Bond Types:
___ Single
___ Double
___ Triple

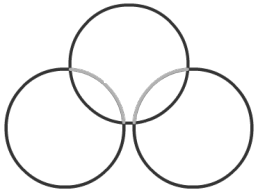
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2
Chemical Formula		
Molecular Name		
Lewis Structure		
Molecular Shape		
Bond Angle		
Formula Mass (g/mol)		

Covalent Bonding - Challenge Level 12

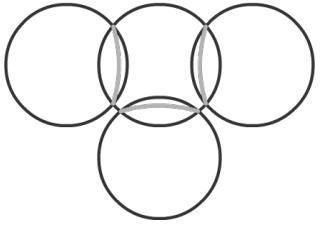
MISSION 1. GATHER YOUR INTEL

Target 1



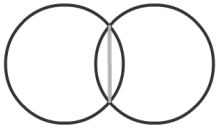
# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



# of Bond Types:
___ Single
___ Double
___ Triple

Target 3



# of Bond Types:
___ Single
___ Double
___ Triple

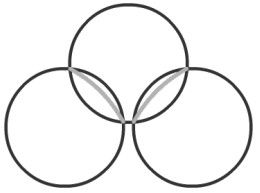
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Molecular Name			
Lewis Structure			
Molecular Shape			
Bond Angle			
Formula Mass (g/mol)			

Covalent Bonding - Challenge Level 13

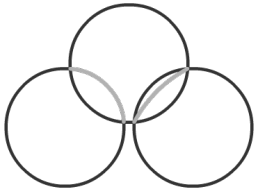
MISSION 1. GATHER YOUR INTEL

Target 1



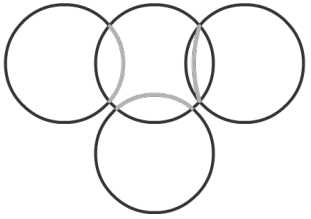
# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



# of Bond Types:
___ Single
___ Double
___ Triple

Target 3



# of Bond Types:
___ Single
___ Double
___ Triple

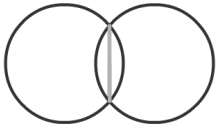
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Molecular Name			
Lewis Structure			
Molecular Shape			
Bond Angle			
Formula Mass (g/mol)			

Covalent Bonding - Challenge Level 14

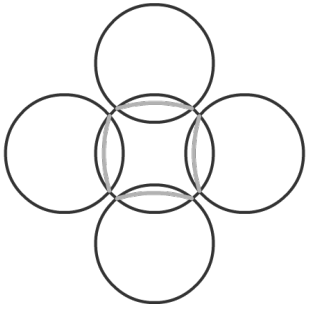
MISSION 1. GATHER YOUR INTEL

Target 1



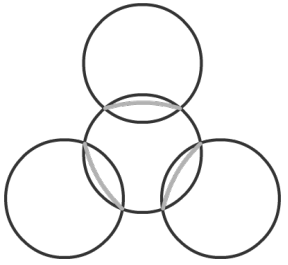
# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



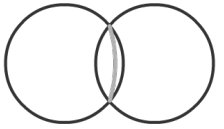
# of Bond Types:
___ Single
___ Double
___ Triple

Target 3



# of Bond Types:
___ Single
___ Double
___ Triple

Target 4



# of Bond Types:
___ Single
___ Double
___ Triple

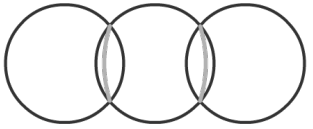
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Lewis Structure				
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				

Covalent Bonding - Challenge Level 15

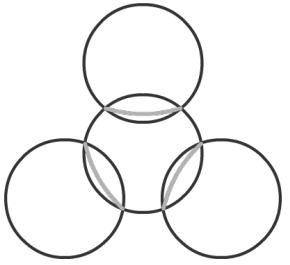
MISSION 1. GATHER YOUR INTEL

Target 1



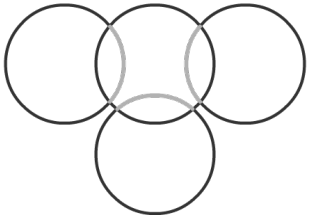
# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



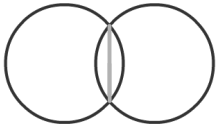
# of Bond Types:
___ Single
___ Double
___ Triple

Target 3



# of Bond Types:
___ Single
___ Double
___ Triple

Target 4



# of Bond Types:
___ Single
___ Double
___ Triple

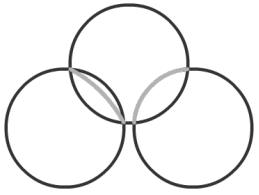
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Lewis Structure				
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				

Covalent Bonding - Challenge Level 16

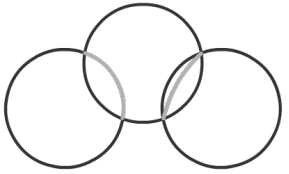
MISSION 1. GATHER YOUR INTEL

Target 1



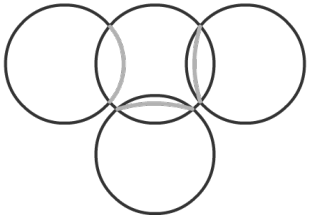
# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



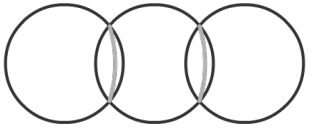
# of Bond Types:
___ Single
___ Double
___ Triple

Target 3



# of Bond Types:
___ Single
___ Double
___ Triple

Target 4



# of Bond Types:
___ Single
___ Double
___ Triple

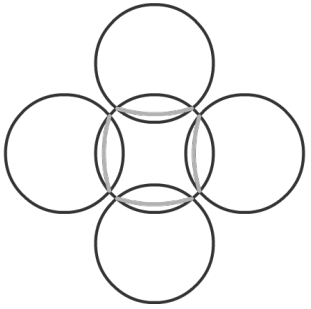
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Lewis Structure				
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				

Covalent Bonding - Challenge Level 17

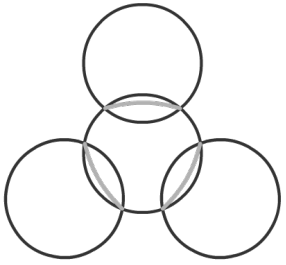
MISSION 1. GATHER YOUR INTEL

Target 1



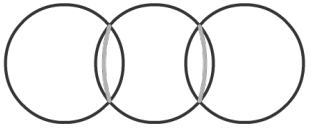
# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



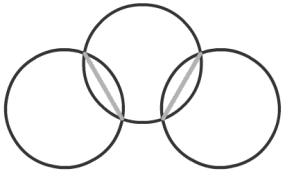
# of Bond Types:
___ Single
___ Double
___ Triple

Target 3



# of Bond Types:
___ Single
___ Double
___ Triple

Target 4



# of Bond Types:
___ Single
___ Double
___ Triple

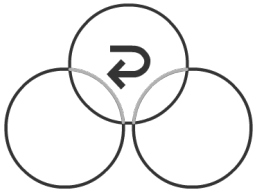
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Lewis Structure				
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				

Covalent Bonding and Atoms - Connected Level 1

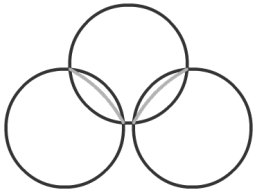
MISSION 1. GATHER YOUR INTEL

Target 1



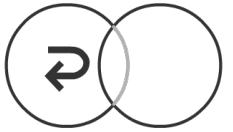
# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



# of Bond Types:
___ Single
___ Double
___ Triple

Target 3



# of Bond Types:
___ Single
___ Double
___ Triple

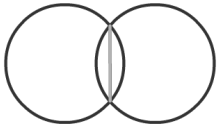
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Molecular Name			
Lewis Structure			
Molecular Shape			
Bond Angle			
Formula Mass (g/mol)			

Covalent Bonding and Atoms - Connected Level 2

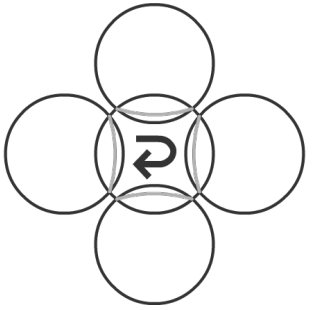
MISSION 1. GATHER YOUR INTEL

Target 1



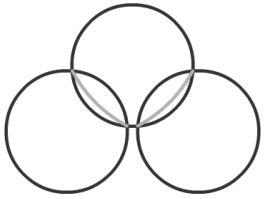
# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



# of Bond Types:
___ Single
___ Double
___ Triple

Target 3



# of Bond Types:
___ Single
___ Double
___ Triple

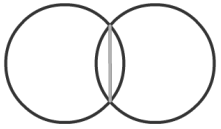
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Molecular Name			
Lewis Structure			
Molecular Shape			
Bond Angle			
Formula Mass (g/mol)			

Covalent Bonding and Atoms - Connected Level 3

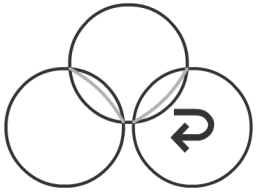
MISSION 1. GATHER YOUR INTEL

Target 1



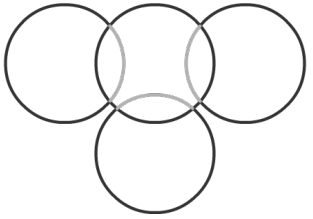
# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



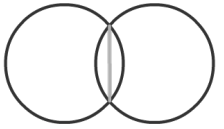
# of Bond Types:
___ Single
___ Double
___ Triple

Target 3



# of Bond Types:
___ Single
___ Double
___ Triple

Target 4



# of Bond Types:
___ Single
___ Double
___ Triple

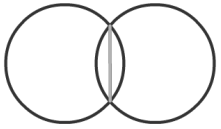
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Lewis Structure				
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				

Covalent Bonding to Atoms - Connected Level 4

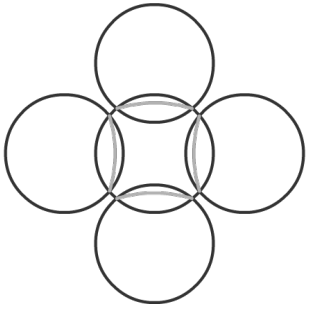
MISSION 1. GATHER YOUR INTEL

Target 1



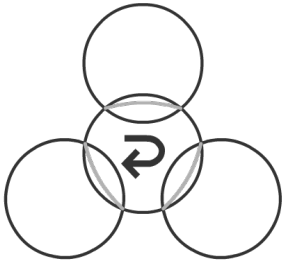
# of Bond Types:
___ Single
___ Double
___ Triple

Target 2



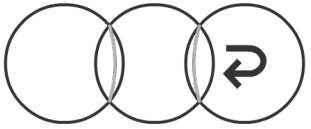
# of Bond Types:
___ Single
___ Double
___ Triple

Target 3



# of Bond Types:
___ Single
___ Double
___ Triple

Target 4



# of Bond Types:
___ Single
___ Double
___ Triple

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Lewis Structure				
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				