

Name: _____

Collisions Username: _____

Class: _____

Covalent Bonding Quest

Now that you have completed the Covalent Bonding Challenges, you are ready to conduct this Covalent Bonding Quest.

MISSION 1. GATHER YOUR INTEL

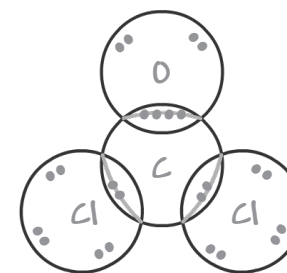
Use your Collisions gameplay experience to gather the following intel:

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) exist in the molecule.

MISSION 2. EXPOSE THE DETAILS

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

Sample Target



of Bond Types:

 2 Single

 1 Double

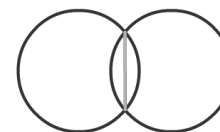
 Triple

	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 1

MISSION 1. GATHER YOUR INTEL

Target 1



of Bond Types:
___ Single
___ Double
___ Triple

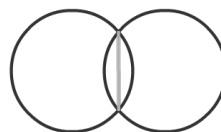
MISSION 2. EXPOSE THE DETAILS

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

Covalent Bonding - Challenge Level 2

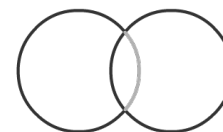
MISSION 1. GATHER YOUR INTEL

Target 1



of Bond Types:
___ Single
___ Double
___ Triple

Target 2



of Bond Types:
___ Single
___ Double
___ Triple

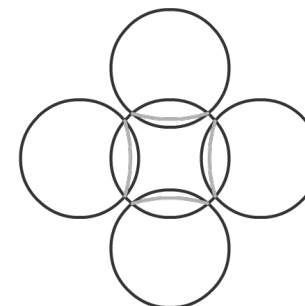
MISSION 2. EXPOSE THE DETAILS

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

Covalent Bonding - Challenge Level 3

MISSION 1. GATHER YOUR INTEL

Target 1



of Bond Types:

___ Single

___ Double

___ Triple

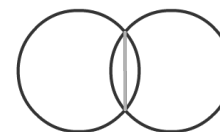
MISSION 2. EXPOSE THE DETAILS

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

Covalent Bonding - Challenge Level 4

MISSION 1. GATHER YOUR INTEL

Target 1



of Bond Types:

- ___ Single
- ___ Double
- ___ Triple

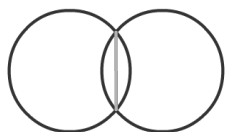
MISSION 2. EXPOSE THE DETAILS

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

Covalent Bonding - Challenge Level 5

MISSION 1. GATHER YOUR INTEL

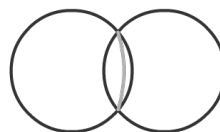
Target 1



of Bond Types:

- Single
- Double
- Triple

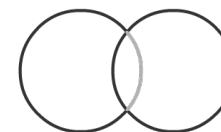
Target 2



of Bond Types:

- Single
- Double
- Triple

Target 3



of Bond Types:

- Single
- Double
- Triple

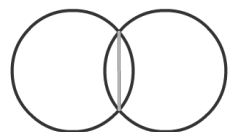
MISSION 2. EXPOSE THE DETAILS

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

Covalent Bonding - Challenge Level 6

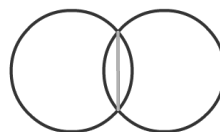
MISSION 1. GATHER YOUR INTEL

Target 1



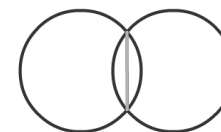
of Bond Types:
___ Single
___ Double
___ Triple

Target 2



of Bond Types:
___ Single
___ Double
___ Triple

Target 3



of Bond Types:
___ Single
___ Double
___ Triple

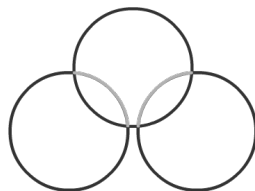
MISSION 2. EXPOSE THE DETAILS

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

Covalent Bonding - Challenge Level 7

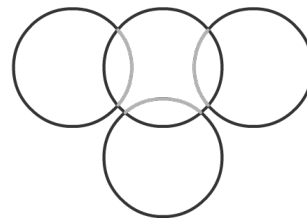
MISSION 1. GATHER YOUR INTEL

Target 1



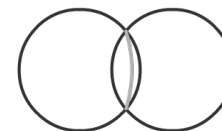
of Bond Types:
___ Single
___ Double
___ Triple

Target 2



of Bond Types:
___ Single
___ Double
___ Triple

Target 3



of Bond Types:
___ Single
___ Double
___ Triple

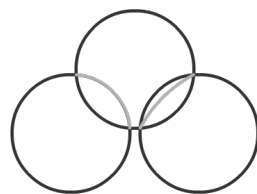
MISSION 2. EXPOSE THE DETAILS

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

Covalent Bonding - Challenge Level 8

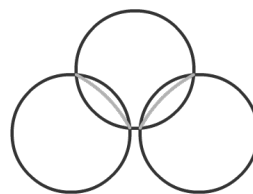
MISSION 1. GATHER YOUR INTEL

Target 1



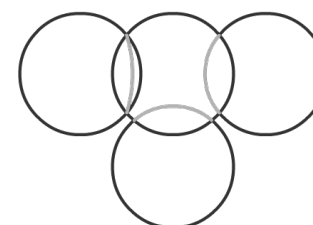
of Bond Types:
___ Single
___ Double
___ Triple

Target 2



of Bond Types:
___ Single
___ Double
___ Triple

Target 3



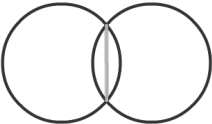
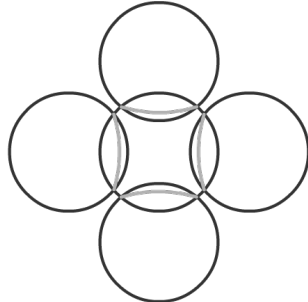
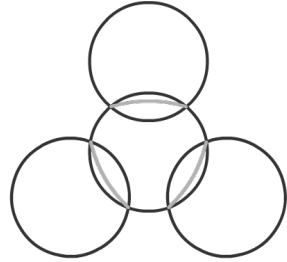
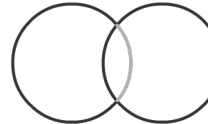
of Bond Types:
___ Single
___ Double
___ Triple

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 9

MISSION 1. GATHER YOUR INTEL

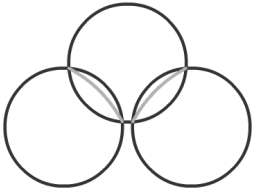
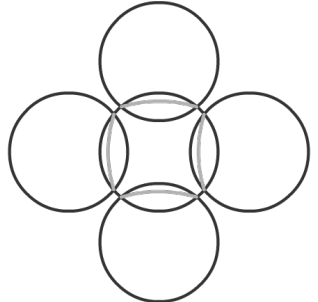
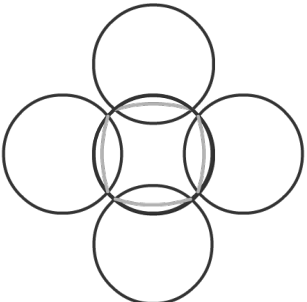
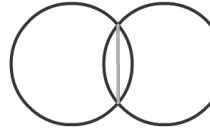
Target 1	Target 2	Target 3	Target 4
			
# of Bond Types:	# of Bond Types:	# of Bond Types:	# of Bond Types:
___ Single	___ Single	___ Single	___ Single
___ Double	___ Double	___ Double	___ Double
___ Triple	___ Triple	___ Triple	___ Triple

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 10

MISSION 1. GATHER YOUR INTEL

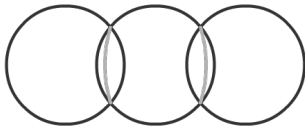
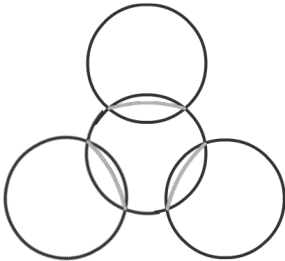
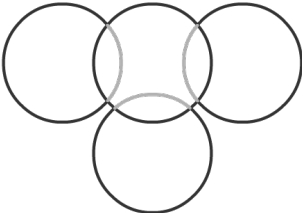
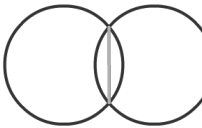
Target 1	Target 2	Target 3	Target 4
			
# of Bond Types: ___ Single ___ Double ___ Triple	# of Bond Types: ___ Single ___ Double ___ Triple	# of Bond Types: ___ Single ___ Double ___ Triple	# of Bond Types: ___ Single ___ Double ___ Triple

MISSION 2. EXPOSE THE DETAILS

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

Covalent Bonding - Challenge Level 11

MISSION 1. GATHER YOUR INTEL

Target 1	Target 2	Target 3	Target 4
			
# of Bond Types: ___ Single ___ Double ___ Triple	# of Bond Types: ___ Single ___ Double ___ Triple	# of Bond Types: ___ Single ___ Double ___ Triple	# of Bond Types: ___ Single ___ Double ___ Triple

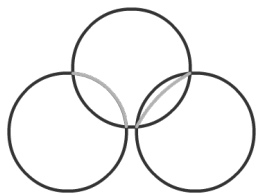
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Lewis Structure				
Molecular Shape				
Bond Angle				

Covalent Bonding - Challenge Level 12

MISSION 1. GATHER YOUR INTEL

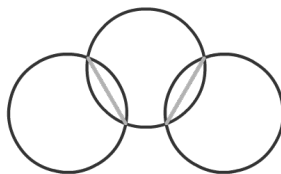
Target 1



of Bond Types:

- Single
- Double
- Triple

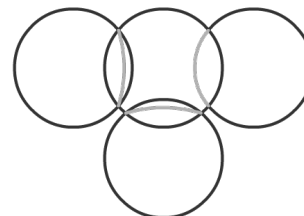
Target 2



of Bond Types:

- Single
- Double
- Triple

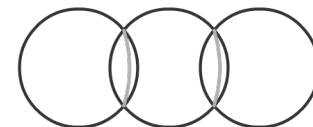
Target 3



of Bond Types:

- Single
- Double
- Triple

Target 4



of Bond Types:

- Single
- Double
- Triple

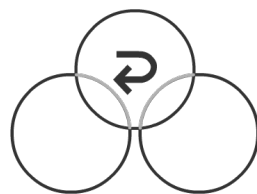
MISSION 2. EXPOSE THE DETAILS

	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

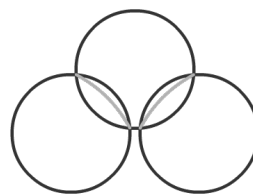
MISSION 1. GATHER YOUR INTEL

Target 1



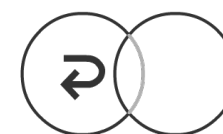
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 3



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

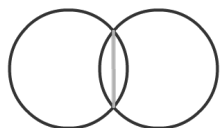
MISSION 2. EXPOSE THE DETAILS

	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

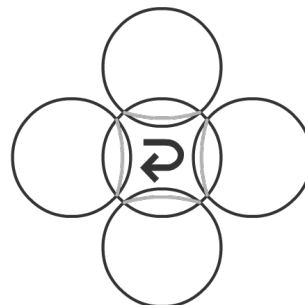
MISSION 1. GATHER YOUR INTEL

Target 1



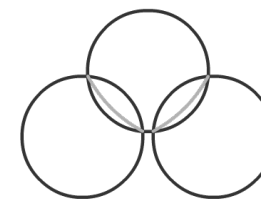
of Bond Types:
___ Single
___ Double
___ Triple

Target 2



of Bond Types:
___ Single
___ Double
___ Triple

Target 3



of Bond Types:
___ Single
___ Double
___ Triple

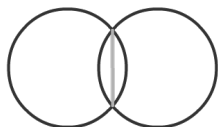
MISSION 2. EXPOSE THE DETAILS

	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

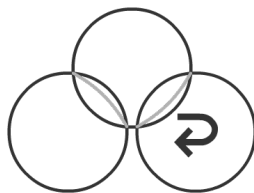
MISSION 1. GATHER YOUR INTEL

Target 1



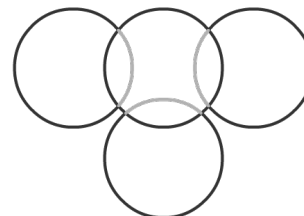
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



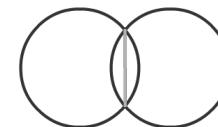
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 3



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 4



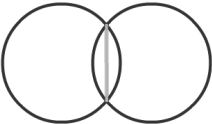
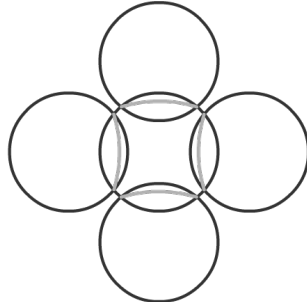
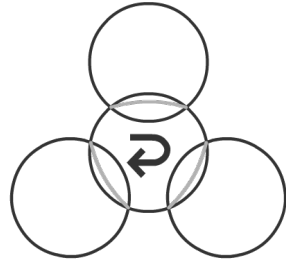
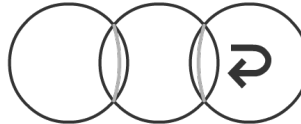
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

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	Target 2	Target 3	Target 4
			
# of Bond Types: ___ Single ___ Double ___ Triple	# 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	Target 4
Chemical Formula				
Molecular Name				
Lewis Structure				
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				