



Name: _____

Collisions Username: _____

Class: _____

Covalent Bonding Quest

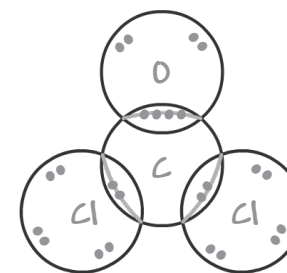
Complete this quest using the Challenge Levels 4, 6, 8 - 10, 11 - 17, and the Connected Levels in the Covalent Bonding game.

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)

Sample Target



of Bond Types:

- 1 Single
2 Double
 ___ Triple

MISSION 2. EXPOSE THE DETAILS

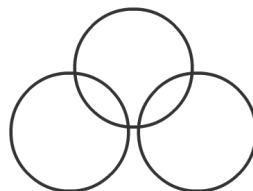
Use your expertise to expose the following information for each target molecule.

	Sample Target
Chemical Formula	COCl_2
Molecular Name	Phosgene
Electron Domains on central atom	3 bonding domains 0 non-bonding domains
Molecular Shape	Trigonal Planar
Bond Angle	120°
Formula Mass (g/mol)	98.91g/mol

Covalent Bonding - Challenge Level 4

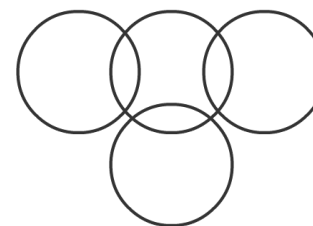
MISSION 1. GATHER YOUR INTEL

Target 1



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

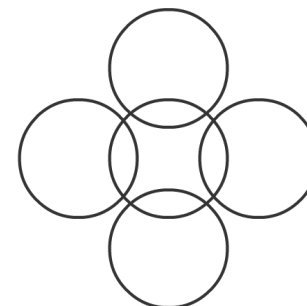
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2
Chemical Formula		
Molecular Name		
Electron Domains on central atom	___ bonding domains ___ non-bonding domains	___ bonding domains ___ non-bonding domains
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

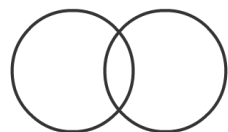
MISSION 2. EXPOSE THE DETAILS

Target 1	
Chemical Formula	
Molecular Name	
Electron Domains on central atom	___ bonding domains ___ nonbonding domains
Molecular Shape	
Bond Angle	
Formula Mass (g/mol)	

Covalent Bonding - Challenge Level 8

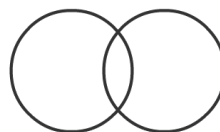
MISSION 1. GATHER YOUR INTEL

Target 1



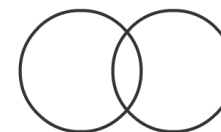
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 3



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

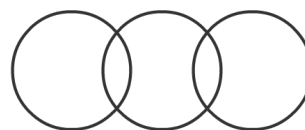
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Molecular Name			
Electron domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
Molecular Shape			
Bond Angle			
Formula Mass (g/mol)			

Covalent Bonding - Challenge Level 9

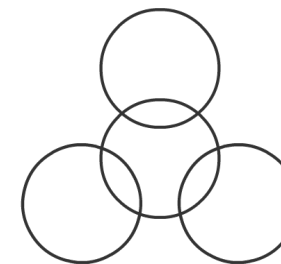
MISSION 1. GATHER YOUR INTEL

Target 1



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

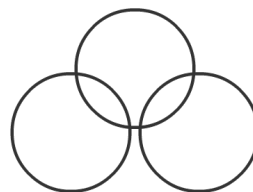
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2
Chemical Formula		
Molecular Name		
Electron Domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
Molecular Shape		
Bond Angle		
Formula Mass (g/mol)		

Covalent Bonding - Challenge Level 10

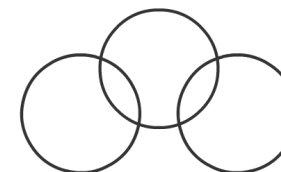
MISSION 1. GATHER YOUR INTEL

Target 1



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

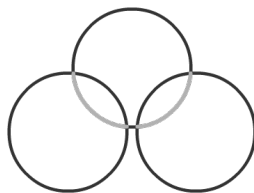
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2
Chemical Formula		
Molecular Name		
Electron domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
Molecular Shape		
Bond Angle		
Formula Mass (g/mol)		

Covalent Bonding - Challenge Level 12

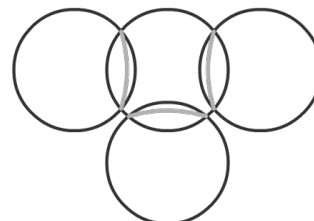
MISSION 1. GATHER YOUR INTEL

Target 1



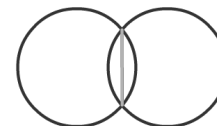
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 3



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

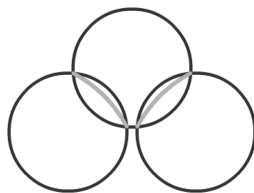
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Molecular Name			
Electron domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
Molecular Shape			
Bond Angle			
Formula Mass (g/mol)			

Covalent Bonding - Challenge Level 13

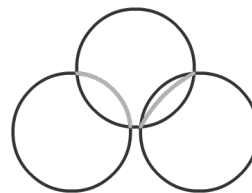
MISSION 1. GATHER YOUR INTEL

Target 1



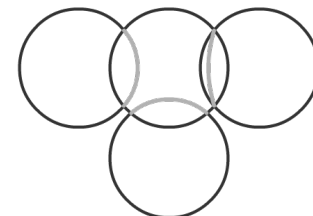
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 3



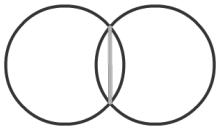
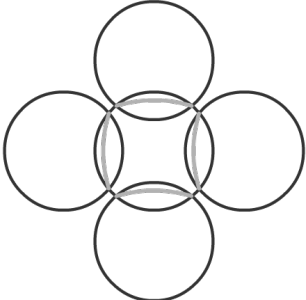
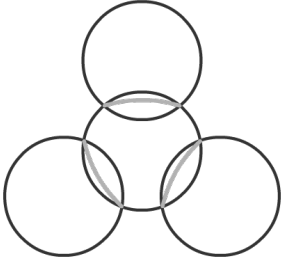
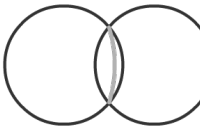
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Molecular Name			
Electron domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
Molecular Shape			
Bond Angle			
Formula Mass (g/mol)			

Covalent Bonding - Challenge Level 14

MISSION 1. GATHER YOUR INTEL

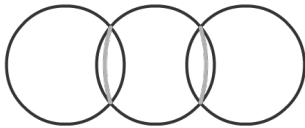
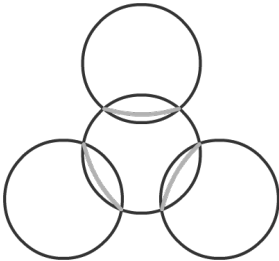
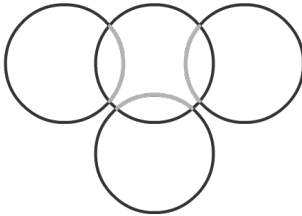
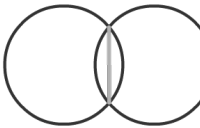
Target 1	Target 2	Target 3	Target 4
			
# of Bond Types:	# of Bond Types:	# of Bond Types:	# of Bond Types:
___ Single	___ Single	___ Single	___ Single
___ Double	___ Double	___ Double	___ Double
___ Triple	___ Triple	___ Triple	___ Triple

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Electron domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				

Covalent Bonding - Challenge Level 15

MISSION 1. GATHER YOUR INTEL

Target 1	Target 2	Target 3	Target 4
			
# of Bond Types: <input type="text"/> Single <input type="text"/> Double <input type="text"/> Triple	# of Bond Types: <input type="text"/> Single <input type="text"/> Double <input type="text"/> Triple	# of Bond Types: <input type="text"/> Single <input type="text"/> Double <input type="text"/> Triple	# of Bond Types: <input type="text"/> Single <input type="text"/> Double <input type="text"/> Triple

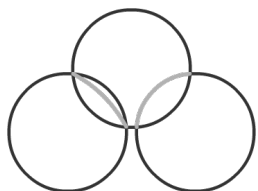
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Electron domains on central atom	<input type="text"/> bonding domains <input type="text"/> nonbonding domains	<input type="text"/> bonding domains <input type="text"/> nonbonding domains	<input type="text"/> bonding domains <input type="text"/> nonbonding domains	<input type="text"/> bonding domains <input type="text"/> nonbonding domains
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				

Covalent Bonding - Challenge Level 16

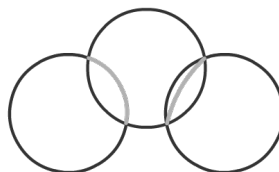
MISSION 1. GATHER YOUR INTEL

Target 1



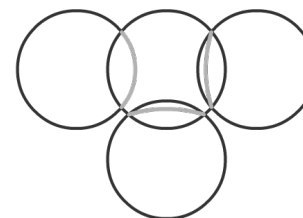
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



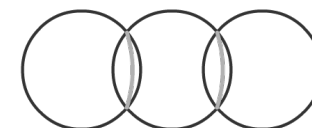
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 3



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 4



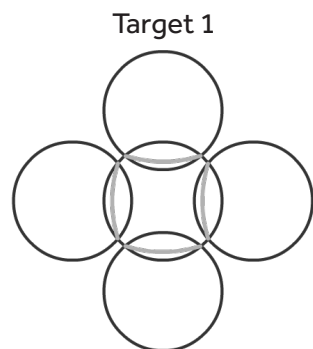
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

MISSION 2. EXPOSE THE DETAILS

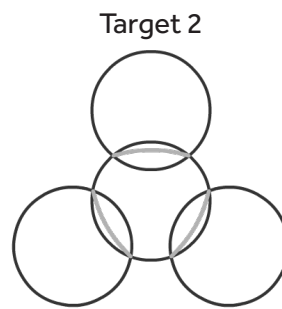
	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Electron domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				

Covalent Bonding - Challenge Level 17

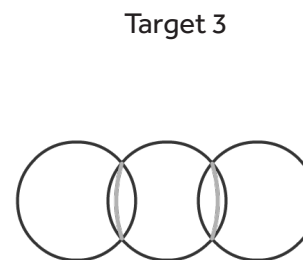
MISSION 1. GATHER YOUR INTEL



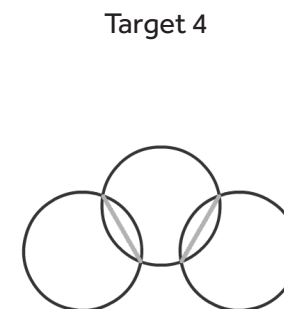
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

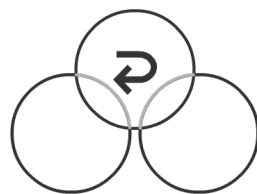
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Electron Domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				

Covalent Bonding and Atoms - Connected Level 1

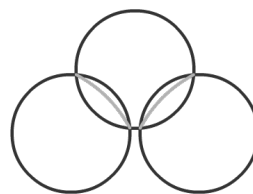
MISSION 1. GATHER YOUR INTEL

Target 1



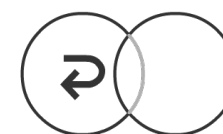
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 3



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

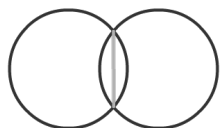
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Molecular Name			
Electron domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
Molecular Shape			
Bond Angle			
Formula Mass (g/mol)			

Covalent Bonding and Atoms - Connected Level 2

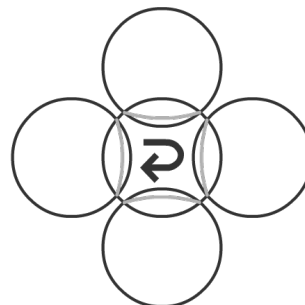
MISSION 1. GATHER YOUR INTEL

Target 1



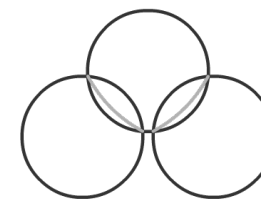
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 3



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

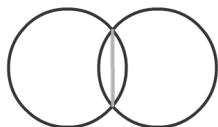
MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3
Chemical Formula			
Molecular Name			
Electron domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
Molecular Shape			
Bond Angle			
Formula Mass (g/mol)			

Covalent Bonding and Atoms - Connected Level 3

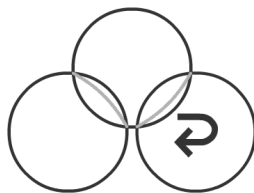
MISSION 1. GATHER YOUR INTEL

Target 1



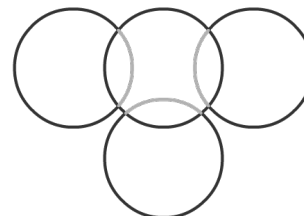
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 2



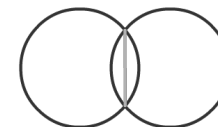
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 3



of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

Target 4



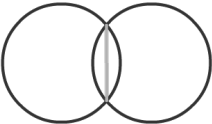
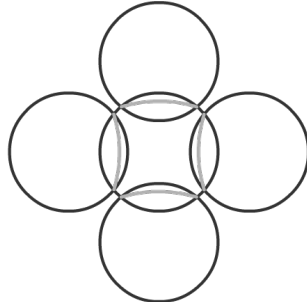
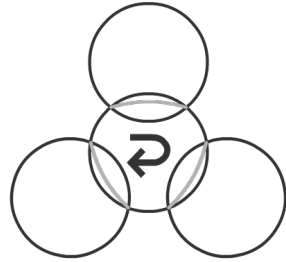
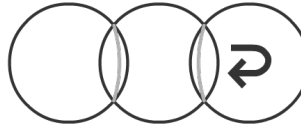
of Bond Types:
 ___ Single
 ___ Double
 ___ Triple

MISSION 2. EXPOSE THE DETAILS

	Target 1	Target 2	Target 3	Target 4
Chemical Formula				
Molecular Name				
Electron domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
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				
Electron domains on central atom	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains	___ bonding domains ___ nonbonding domains
Molecular Shape				
Bond Angle				
Formula Mass (g/mol)				