



Name: _____

Collisions Username: _____

Class: _____

Atoms Quest

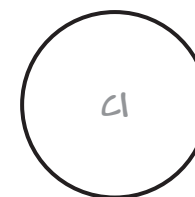
Complete this quest using the Challenge Levels 6 - 13 in the Atoms game.

MISSION 1. GATHER YOUR INTEL

Use your Collisions gameplay experience to gather the following intel for Atoms levels 6 - 13:

1. Label the correct element symbol in the circle.
2. List the # of protons found in the atom.
3. List the # of electrons found in the atom.

Sample Target



of Protons: 17
of Electrons: 17

MISSION 2. EXPOSE THE DETAILS

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

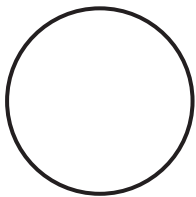
	Sample Target
Element Name	Chlorine
Atomic Number	17
Mass Number	35.453
# of Neutrons	17
Metal, Nonmetal, or Metalloid?	Nonmetal
Electron Configuration	$1s^2 2s^2 2p^6 3s^2 3p^5$
# of Valence Electrons	7
Group Name	Halogen
Number of Energy Levels	3
# of Unpaired Electrons	1

Atoms - Challenge Level 6

MISSION 1. GATHER YOUR INTEL

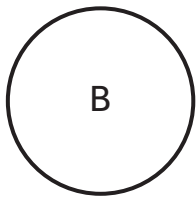
(smallest \longrightarrow largest)

Atom 1



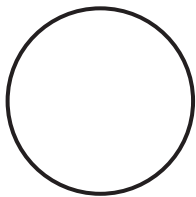
of Protons: ____
of Electrons: ____

Atom 2



of Protons: ____
of Electrons: ____

Atom 3



of Protons: ____
of Electrons: ____

< <

MISSION 2. EXPOSE THE DETAILS

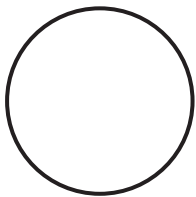
	Atom 1	Atom 2	Atom 3
Element Name			
Atomic Number			
Mass Number			
# of Neutrons			
Metal, Nonmetal, or Metalloid?			
Electron Configuration			
# of Valence Electrons			
Group Name			
Number of Energy Levels			
# of Unpaired Electrons			

Atoms - Challenge Level 7

MISSION 1. GATHER YOUR INTEL

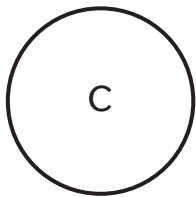
(smallest \longrightarrow largest)

Atom 1



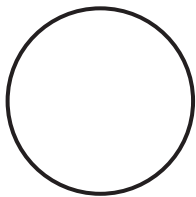
of Protons: ____
of Electrons: ____

Atom 2



of Protons: ____
of Electrons: ____

Atom 3



of Protons: ____
of Electrons: ____

< <

MISSION 2. EXPOSE THE DETAILS

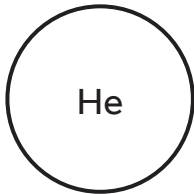
	Atom 1	Atom 2	Atom 3
Element Name			
Atomic Number			
Mass Number			
# of Neutrons			
Metal, Nonmetal, or Metalloid?			
Electron Configuration			
# of Valence Electrons			
Group Name			
Number of Energy Levels			
# of Unpaired Electrons			

Atoms - Challenge Level 8

MISSION 1. GATHER YOUR INTEL

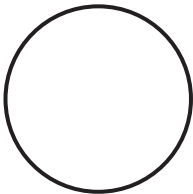
(smallest \longrightarrow largest)

Atom 1



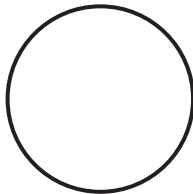
of Protons: _____
of Electrons: _____

Atom 2



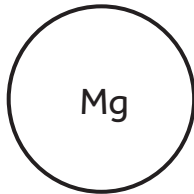
of Protons: _____
of Electrons: _____

Atom 3



of Protons: _____
of Electrons: _____

Atom 4



of Protons: _____
of Electrons: _____

< < <

MISSION 2. EXPOSE THE DETAILS

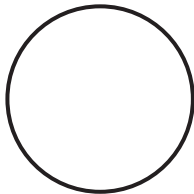
	Atom 1	Atom 2	Atom 3	Atom 4
Element Name				
Atomic Number				
Mass Number				
# of Neutrons				
Metal, Nonmetal, Metalloid?				
Electron Configuration				
# of Valence Electrons				
Group Name				
# of Energy Levels				
# of Unpaired Electrons				

Atoms - Challenge Level 9

MISSION 1. GATHER YOUR INTEL

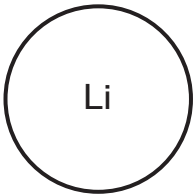
(smallest → largest)

Atom 1



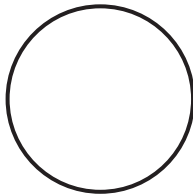
of Protons: ____
of Electrons: ____

Atom 2



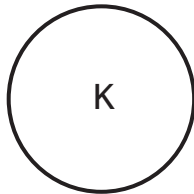
of Protons: ____
of Electrons: ____

Atom 3



of Protons: ____
of Electrons: ____

Atom 4



of Protons: ____
of Electrons: ____

< < <

MISSION 2. EXPOSE THE DETAILS

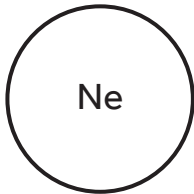
	Atom 1	Atom 2	Atom 3	Atom 4
Element Name				
Atomic Number				
Mass Number				
# of Neutrons				
Metal, Nonmetal, Metalloid?				
Electron Configuration				
# of Valence Electrons				
Group Name				
# of Energy Levels				
# of Unpaired Electrons				

Atoms - Challenge Level 10

MISSION 1. GATHER YOUR INTEL

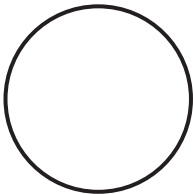
(smallest \longrightarrow largest)

Atom 1



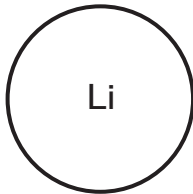
of Protons: ____
of Electrons: ____

Atom 2



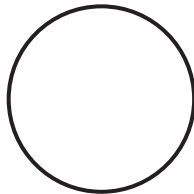
of Protons: ____
of Electrons: ____

Atom 3



of Protons: ____
of Electrons: ____

Atom 4



of Protons: ____
of Electrons: ____

< < <

MISSION 2. EXPOSE THE DETAILS

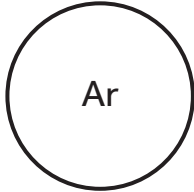
	Atom 1	Atom 2	Atom 3	Atom 4
Element Name				
Atomic Number				
Mass Number				
# of Neutrons				
Metal, Nonmetal, Metalloid?				
Electron Configuration				
# of Valence Electrons				
Group Name				
# of Energy Levels				
# of Unpaired Electrons				

Atoms - Challenge Level 11

MISSION 1. GATHER YOUR INTEL

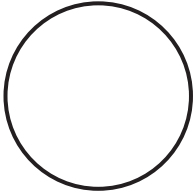
(smallest \longrightarrow largest)

Atom 1



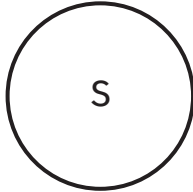
of Protons: _____
of Electrons: _____

Atom 2



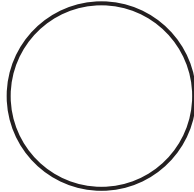
of Protons: _____
of Electrons: _____

Atom 3



of Protons: _____
of Electrons: _____

Atom 4



of Protons: _____
of Electrons: _____

< < <

MISSION 2. EXPOSE THE DETAILS

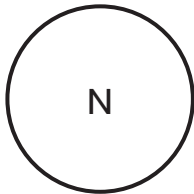
	Atom 1	Atom 2	Atom 3	Atom 4
Element Name				
Atomic Number				
Mass Number				
# of Neutrons				
Metal, Nonmetal, Metalloid?				
Electron Configuration				
# of Valence Electrons				
Group Name				
# of Energy Levels				
# of Unpaired Electrons				

Atoms - Challenge Level 12

MISSION 1. GATHER YOUR INTEL

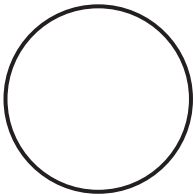
(smallest \longrightarrow largest)

Atom 1



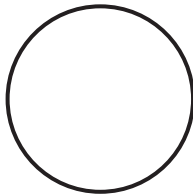
of Protons: _____
of Electrons: _____

Atom 2



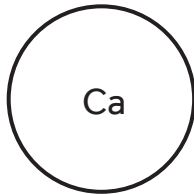
of Protons: _____
of Electrons: _____

Atom 3



of Protons: _____
of Electrons: _____

Atom 4



of Protons: _____
of Electrons: _____

< < <

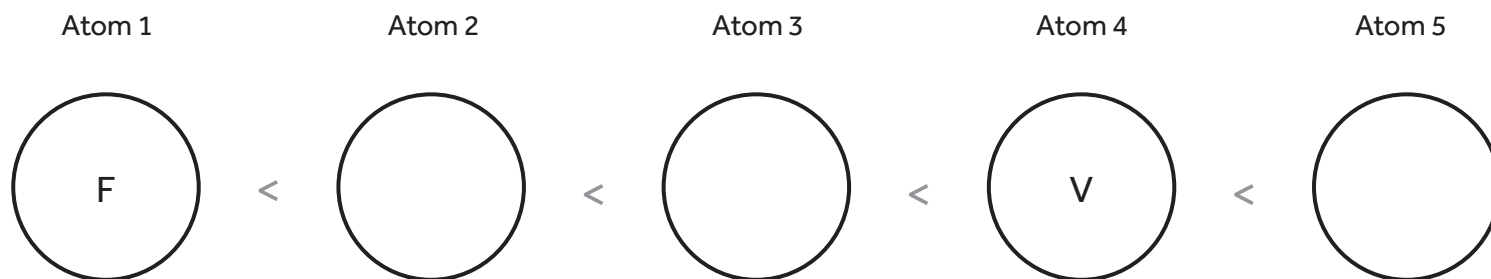
MISSION 2. EXPOSE THE DETAILS

	Atom 1	Atom 2	Atom 3	Atom 4
Element Name				
Atomic Number				
Mass Number				
# of Neutrons				
Metal, Nonmetal, Metalloid?				
Electron Configuration				
# of Valence Electrons				
Group Name				
# of Energy Levels				
# of Unpaired Electrons				

Atoms - Challenge Level 13

MISSION 1. GATHER YOUR INTEL

(smallest \longrightarrow largest)



of Protons: _____
of Electrons: _____

of Protons: _____
of Electrons: _____

of Protons: _____
of Electrons: _____

of Protons: _____
of Electrons: _____

of Protons: _____
of Electrons: _____

MISSION 2. EXPOSE THE DETAILS

	Atom 1	Atom 2	Atom 3	Atom 4	Atom 5
Element Name					
Atomic Number					
Mass Number					
# of Neutrons					
Metal, Nonmetal, Metalloid?					
Electron Configuration					
# of Valence Electrons					
Group Name					
# of Energy Levels					
# of Unpaired Electrons					