



















Bohr Diagram Template

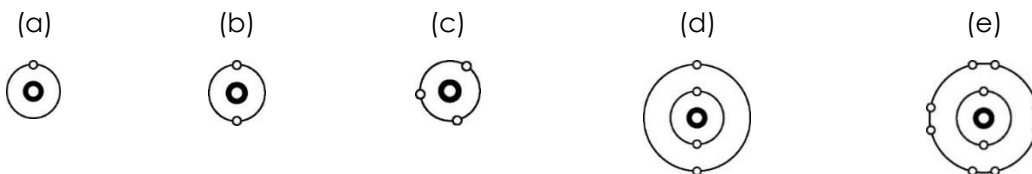
<div>H</div> <div></div> <div>HYDROGEN</div>							<div>He</div> <div></div> <div>HELIUM</div>
<div>Li</div> <div></div> <div>LITHIUM</div>	<div>Be</div> <div></div> <div>BERYLLIUM</div>	<div>B</div> <div></div> <div>BORON</div>	<div>C</div> <div></div> <div>CARBON</div>	<div>N</div> <div></div> <div>NITROGEN</div>	<div>O</div> <div></div> <div>OXYGEN</div>	<div>F</div> <div></div> <div>FLUORINE</div>	<div>Ne</div> <div></div> <div>NEON</div>
<div>Na</div> <div></div> <div>SODIUM</div>	<div>Mg</div> <div></div> <div>MAGNESIUM</div>	<div>Al</div> <div></div> <div>ALUMINUM</div>	<div>Si</div> <div></div> <div>SILICON</div>	<div>P</div> <div></div> <div>PHOSPHORUS</div>	<div>S</div> <div></div> <div>SULFUR</div>	<div>Cl</div> <div></div> <div>CHLORINE</div>	<div>Ar</div> <div></div> <div>ARGON</div>

BOHR ASSIGNMENT:

Answer the following questions:

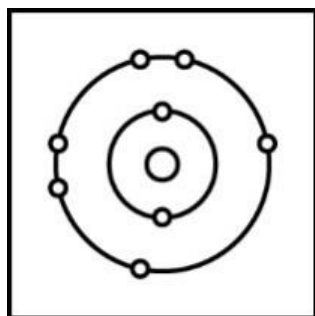
1. In what ways are the Bohr model diagrams for the alkali metals similar?
2. Examine the rows of the periodic table. As the rows increase, what happens to the number of electron shells?
3. How many electrons are there in the outer shell of a sulfur(S) atom?
4. How many electron shells would you expect to find in a sulfur atom?
5. Identify the elements whose Bohr model diagrams are shown below. Write the symbols of the elements in the spaces provided

6. Examine the Bohr model diagrams below. Highlight the atoms that are stable.

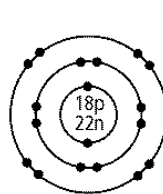


Why did you choose the one(s) you did?

7. The following Bohr model diagram represents an oxygen atom. Examine the diagram, then answer the following questions.

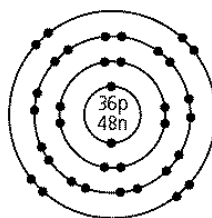


- (a) why is this not a stable electron arrangement?
- (b) what would make this atom stable?
- (c) use a different coloured pen to adjust the diagram so that it shows a stable electron arrangement

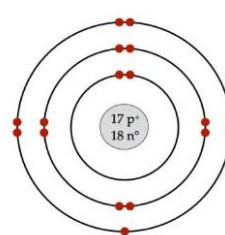


Atom 1

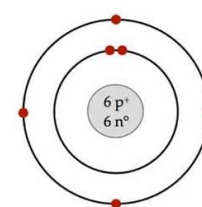
Atom 1



Atom 2



Atom 3



Atom 4

ATOM	ELEMENT	MASS NUMBER	PERIOD	HOW DO YOU KNOW WHAT PERIOD THE ELEMENT IS FOUND IN BY LOOKING AT THE BOHR MODEL?	FAMILY	STABLE OR UNSTABLE?
1						
2						
3						
4						
RE-DRAW STABLE BOHR DIAGRAMS FOR ANY ATOMS THAT WERE UNSTABLE (AND WRITE THEIR SYMBOL)						

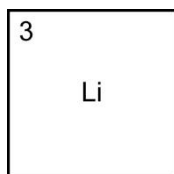
Worksheet: ATOMS AND IONS

1. Use the words from the list to fill in the blanks in the paragraph below.

attract, charge, electron, ionic bond, negative, negatively charged, opposite, positive, positively charged, transferred

- (a) When an atom gains or loses a(n) _____, an ion is formed. All ions have a(n) _____.
- (b) Metals tend to form _____ ions. Non-metals tend to form _____ ions.
- (c) When a metal atom reacts with a non-metal atom, one or more electrons are _____, which results in the formation of ions. One of these ions will be _____ and one will be _____. Because of these _____ charges, the ions _____ each other, forming a(n) _____.

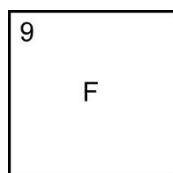
2. (a) Draw a model Bohr diagram for lithium in the space provided.



(b) What process or change would turn this lithium atom into an ion?

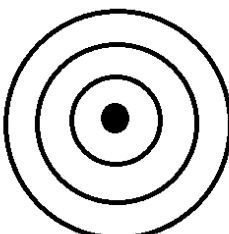
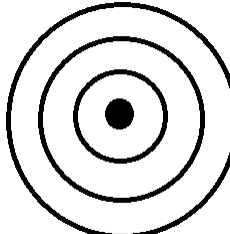
(c) Would the ion that it forms be positively or negatively charged? Explain.

3. (a) Draw a Bohr model diagram for fluorine in the space provided.



(b) What process or change would turn this fluorine atom into an ion?

(c) Would this ion be positively charged or negatively charged? Explain.

		Boron atom		Boron ion	
		Atomic number:		Atomic number:	
		Mass number:		Mass number:	
		Protons:		Protons:	
		Neutrons:		Neutrons:	
		Electrons:		Electrons:	
Boron atom		Cation/Anion:		Ion symbol:	
		Nitrogen atom		Nitrogen ion	
		Atomic number:		Atomic number:	
		Mass number:		Mass number:	
		Protons:		Protons:	
		Neutrons:		Neutrons:	
		Electrons:		Electrons:	
Nitrogen atom		Cation/Anion:		Ion symbol:	