Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Lewis Dot or Electron Dot Diagrams

○ ○ ○ <b>H</b> ○ ○ ○	<ol> <li>Complete the Electron Dot Diagrams (Lewis Dot Diagrams) for the first 20 atoms by shading in the appropriate electrons</li> </ol>								
0 0	00	00	0 0	00	0 0	0 0	0 0		
° Li °	°Be°	° <b>B</b> °	°C°	$\stackrel{\circ}{}_{\circ}$ N $\stackrel{\circ}{}_{\circ}$	° <b>O</b> °	° <b>F</b> °	°Ne°		
0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0		
0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0		
$^{\circ}_{\circ}$ Na $^{\circ}_{\circ}$	$^{\circ}_{\circ}Mg^{\circ}_{\circ}$	° Al °	° Si°	° P°	°S°	° Cl °	°Ar°		
0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0		
$\circ \circ $	<ul> <li>Complete the following questions in full sentences on a separate sheet of paper</li> <li>Label the following groups on the periodic table above: alkali metals, noble gases, halogens and alkaline earth metals.</li> <li>What charge do all the alkali metals have when they form ions? Explain why.</li> <li>What charge do all the halogens have when they form ions? Explain why.</li> <li>What charge do all the alkaline earth metals have when they form ions? Explain why.</li> <li>What charge do all the alkaline earth metals have when they form ions? Explain why.</li> <li>What charge do all the alkaline earth metals have when they form ions? Explain why.</li> <li>What charge do all the alkaline earth metals have when they form ions? Explain why.</li> </ul>								

## Lewis Dot or Electron Dot Diagrams of lons

○ 0 ○ <b>H</b> ○ ○ ○	<ol> <li>Complete the Electron Dot Diagrams (Lewis Dot Diagrams) for the first 20 atoms by shading in the appropriate electrons</li> <li>Using a different colour either add (shade in) or remove (by crossing out) electrons to show the formation of the stable ion</li> <li>Indicate the charge on the ion by placing square brackets around the diagram and writing the charge as a superscript</li> </ol>							
0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
° Li °	° <b>Be</b> °	°B°	°C°	$\stackrel{\circ}{}$ N $\stackrel{\circ}{}$	$\stackrel{\circ}{}$ <b>O</b> $\stackrel{\circ}{}$	°F°	°Ne°	
0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
$^{\circ}_{\circ}$ Na $^{\circ}_{\circ}$	$^{\circ}_{\circ}$ Mg $^{\circ}_{\circ}$	°AI°	°Si°	°P°	°S°	° Cl °	°Ar°	
0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
° ° ° ° <b>K</b> °	$\circ \circ $							

## Complete the following questions in full sentences on a separate sheet of paper

- 1. Label the following groups on the periodic table above: alkali metals, noble gases, halogens and alkaline earth metals.
- 2. What charge do all the alkali metals have when they form ions? Explain why.
- 3. What charge do all the halogens have when they form ions? Explain why.
- 4. What charge do all the alkaline earth metals have when they form ions? Explain why.
- 5. Why do the noble gases not form ions?