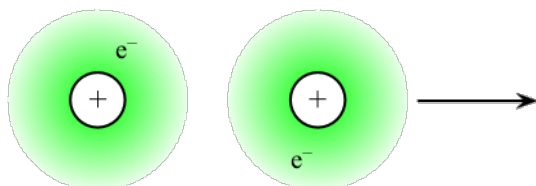


**WKS**  
**Covalent Bonding Worksheet**  
**Single Bonds**

NAME \_\_\_\_\_  
Period \_\_\_\_\_ Date \_\_\_\_\_

1. What is a covalent bond? How does it differ from an ionic bond? Why does it form?
2. On the atomic diagram below, indicate with arrows this attraction, then redraw the atoms to show the covalent bond formation and label the bond length,  $d$ .



3. Describe the differences between single, double & triple bonds. How many sigma and pi bonds are in each?
4. Describe the relationship between length and strength of covalent bonds.
5. Breaking bonds (**absorbs energy, releases energy**) therefore is (**endothermic, exothermic**). Forming bonds (**absorbs energy, releases energy**) therefore is (**endothermic, exothermic**).
6. List at least three properties of a covalent compound.