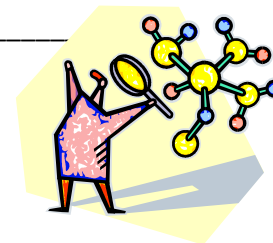


# Molecular Models



**Pre-Lab:** Using your periodic table and materials at your desk, complete the following data table.

Element	Symbol	Color	# of holes	Lewis Structure	Metal or Non-Metal?	Give or Take/Share electrons?
	C	○				
	H	○				
	O	○				
	Cl	○				
	Na	○				
	K	○				
	Mg	○				
	N	○				

**(Metal + Non-Metal) = Ionic Bond & (Non-Metal + Non-Metal) = Covalent Bond**

## Directions:

1. At each station, there are index cards with chemical formulas and the materials needed to make each molecular model.
2. Create the models and complete the data table.
3. Have your answers checked before you leave each station.

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

<b>Formula</b>	<b>Count Atoms</b>	<b>Draw and Color Model</b>	<b>Ionic/Covalent?</b>
<b>H<sub>2</sub></b>	<b>2 Hydrogen</b>		
<b>HCl</b>			
<b>NaCl</b>			
<b>KCl</b>			
<b>KOH</b>			
<b>MgCl<sub>2</sub></b>			
<b>NH<sub>3</sub></b>			
<b>Mg(OH)<sub>2</sub></b>			
<b>H<sub>2</sub>O</b>			

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

Formula	Count Atoms	Draw and Color Model	Ionic/Covalent?
<b>H<sub>2</sub>O<sub>2</sub></b>			
<b>CCl<sub>4</sub></b>			
<b>CH<sub>4</sub></b>			
<b>N<sub>2</sub></b>			
<b>Cl<sub>2</sub></b>			
<b>CO<sub>2</sub></b>			
<b>NaOH</b>			
<b>C<sub>2</sub>H<sub>6</sub></b>			

Formula	Count Atoms	Draw and Color Model	Ionic/Covalent?
<b>C<sub>3</sub>H<sub>8</sub></b>			
<b>C<sub>2</sub>H<sub>6</sub>O</b>			
<b>C<sub>2</sub>H<sub>6</sub>O</b> <b>Isomer</b>			

### Analysis Questions

- 1) What do the holes in the models represent? How can you use them to show bonding?
- 2) How can you use the periodic table to predict the type of bond formed between two or more atoms?
- 3) What is the difference between Ionic and Covalent bonds?
- 4) What is an Isomer?

### Conclusion

Write 3-5 complete sentences on what you learned by doing this activity.