

**Unit 4 problem set 4**  
**Covalent Bonding Packet**

**Objective:** You will determine how atoms are joined in a covalently bonded molecule, and how to name those compounds.

**Materials:** molecular model kit

**Method and Observations:**

I want you to do 5 things with each molecule below. You need to find the **dot structure, 3-D sketch, type of geometry, polarity and name** of each molecule. Organize this in a neat format.

The spheres are arranged according to groups and atoms:

<u>Group/Atom</u>	<u>Color</u>
IV	Black
V	Blue
VI	Red
F or Br	Orange
Cl	Green
I	Purple
H	White

**H<sub>2</sub>**

<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>		<b>Name</b>

**F<sub>2</sub>**

<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>		<b>Name</b>



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



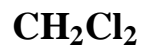
<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



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<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



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<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	



<b>Dot Structure</b>		<b>3-D Sketch</b>	
<b>Geometry</b>	<b>Polarity</b>	<b>Name</b>	

**Calculations and Results:**

•Put the compounds in a table of polar vs. nonpolar molecules.

<b>Polar</b>	<b>Nonpolar</b>

- Without using models, explain how you could experimentally, in a lab, determine if these molecules were polar or non-polar. Incorporate a drawing here.

Polar	Nonpolar

**Conclusion:**

- List the “real world” uses of two of the 20 compounds used in this lab.