

# Bonding Sit Down Practice

1. Name ALL the bonds in each of these substances

HBr	AlCl <sub>3</sub>	CO <sub>2</sub>
F <sub>2</sub>	O <sub>2</sub>	Fe

2. Name ALL the bonds in each of these compounds

C <sub>2</sub> H <sub>6</sub>	C <sub>2</sub> H <sub>4</sub>	C <sub>2</sub> H <sub>2</sub>
3. Match the alloys to their component elements.	1 Sterling silver 2 Brass 3 Cast iron 4 Stainless steel	A Zinc + Copper B Carbon + Iron C Chromium + Iron D Copper + Silver

4. Intermolecular bonding is not inside of compounds, it's between particles (either atoms or molecules).

List IMF weakest to strongest	Match substances to the IMF they exhibit
	F <sub>2</sub> dipole attraction
	H <sub>2</sub> O                      electron dispersion
	PCl <sub>3</sub> hydrogen bonding

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F<sub>2</sub>                      dipole attraction

H<sub>2</sub>O                      electron dispersion

PCl<sub>3</sub>                      hydrogen bonding

5. How does metallic bonding explain metallic properties? Metals...

1. are Malleable

2. are Ductile

3. can Conduct Electricity

6. Name ALL the bonds in each of these substances.

CH<sub>4</sub>

AlCl<sub>3</sub>

NH<sub>3</sub>

NBr<sub>3</sub>

O<sub>3</sub>

MgO

7. Rank these bonds from most polar to least polar.

H-I	H-Cl	H-O
O-F	I-I	C=O

8. Are these molecules polar or nonpolar?

CO <sub>2</sub>	CH <sub>4</sub>	HCl
H <sub>2</sub> O	C <sub>2</sub> H <sub>6</sub>	BF <sub>3</sub>

9. Which has the higher boiling point?

I <sub>2</sub> Br <sub>2</sub>	NH <sub>3</sub> CCl <sub>4</sub>
H <sub>2</sub> O    OF <sub>2</sub>	SCl <sub>2</sub> SiCl <sub>4</sub>

6. Name ALL the bonds in each of these substances.		
CH <sub>4</sub>	AlCl <sub>3</sub>	NH <sub>3</sub>
NBr <sub>3</sub>	O <sub>3</sub>	MgO
7. Rank these bonds from most polar to least polar.		
H-I	H-Cl	H-O
O-F	I-I	C=O
8. Are these molecules polar or nonpolar?		
CO <sub>2</sub>	CH <sub>4</sub>	HCl
H <sub>2</sub> O	C <sub>2</sub> H <sub>6</sub>	BF <sub>3</sub>
9. Which has the higher boiling point?	I <sub>2</sub> Br <sub>2</sub>	NH <sub>3</sub> CCl <sub>4</sub>
	H <sub>2</sub> O    OF <sub>2</sub>	SCl <sub>2</sub> SiCl <sub>2</sub>

10. Name all the bonds in these compound or substances.

$N_2$	$O_2$	$Br_2$
$HCN$	$CuSO_4$	$H_2O$

11. Something special about the bonding happens in each of these boxes, what might that be?

$CO$	$O_3$	$PCl_5$
$Pb$	$BCl_3$	Diamond, Graphite, and Bucky balls

12. Name all the bonds found in these substances.

$KBr$	$NaNO_3$	$NBr_3$
$C_2F_4$	$AsH_3$	$NaOH$