


INTERMOLECULAR FORCES

Name: _____

Directions:

1. Log into Collisions and navigate to the Intermolecular Forces Game.
2. Play the Tutorial Levels, if you haven't done so already.
3. Exit the levels and enter the Intermolecular Forces Sandbox. 
4. Build each compound listed in the table below and record the requested information.

STEP 1: Build each molecule in the Intermolecular Forces Sandbox and draw the Lewis Structure below.

	HCl	CH ₃ F	H ₂	CH ₂ O	O ₂
Molecular Name	hydrochloric acid				
Lewis Structure (Include the partial charge around the molecule.)	$\delta^+ \text{ H} : \ddot{\text{Cl}} : \delta^-$				

STEP 2: Determine the information below.

	HCl	CH ₃ F	H ₂	CH ₂ O	O ₂
Molecular Polarity (polar or non-polar)	polar				
Type of IMF <ul style="list-style-type: none"> ✦ LDF ★ Dipole-Dipole ✦ Hydrogen Bond 	Dipole-Dipole				

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STEP 1: Build the molecule in the Intermolecular Forces Sandbox and draw the Lewis Structure below.

	CH ₄	CO ₂	CH ₂ Cl ₂	HF	N ₂
Molecular Name					
Lewis Structure (Include the partial charge around the molecule.)					

STEP 2: Determine the information below.

	CH ₄	CO ₂	CH ₂ Cl ₂	HF	N ₂
Molecular Polarity (polar or non-polar)					
Type of IMF <ul style="list-style-type: none"> ✦ LDF ★ Dipole-Dipole ✦ Hydrogen Bond 					

Analysis Questions:

- List the IMF types from weakest to strongest.
- How does molecular polarity influence the type of IMF between particles?