

Grade 10/11/12

Distance Learning Module 9: Week of: June 1 - June 5

Molecular Polarity & Intermolecular Forces of Attraction

## **Honors Chemistry - Modified from [Unit 7 - Chemical Bonding, Molecular Geometry, & Intermolecular Forces of Attraction](#)**

### **Targeted Goals from Stage 1:**

**Content Knowledge:** There are four types of crystal lattice structures: ionic, molecular, covalent (network solids), and metallic. London dispersion forces are attractive forces present between all atoms and molecules. London dispersion forces are often the strongest net intermolecular force between large molecules. Dipole forces result from the attraction among the positive ends and negative ends of polar molecules. Hydrogen bonding is a strong type of dipole-dipole force. Intermolecular forces play a role in determining the properties of substances, including biological structures and interactions. The hydrogen bonding between water molecules explains the many unique properties of water.

### **Vocabulary:**

**Skills:** Interpret Lewis Dot structures to predict molecular shape and polarity (including bond angles, bond polarity, and hybridization). Relate physical properties of liquids to the strengths of the intermolecular forces of attraction.

### **Expectation:**

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone at end of the week)
Monday: <i>Students can set their own pacing, but make sure to meet the weekly expectations shown below:</i> <ul style="list-style-type: none"><li>• Watch Edpuzzle Video on determining Molecular Polarity</li><li>• Save notes to submit when you have completed the module</li><li>• Complete Polar &amp; Nonpolar POGIL</li><li>• Complete Additional Practice_Molecular Polarity Worksheet</li></ul>	Edpuzzle: Mod 9_Video 1_Determining Molecular Polarity  Polar and Nonpolar POGIL.pdf  Additional Practice_Molecular Polarity Worksheet	<ul style="list-style-type: none"><li><input type="checkbox"/> view &amp; answer embedded multiple choice while watching edpuzzle videos - grade will automatically transfer to Classroom when video is watched to the end &amp; show results button is checked</li><li><input type="checkbox"/> picture of or electronically submitted completed Polar and Nonpolar POGIL</li><li><input type="checkbox"/> picture of or electronically submitted completed Additional Practice_Molecular Polarity Worksheet</li></ul>

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone at end of the week)
<p>Tuesday:</p> <ul style="list-style-type: none"> <li>• Watch Edpuzzle Video Molecular Polarity &amp; Intermolecular Forces</li> <li>• Review Notes - IMF Flow Chart</li> <li>• Save notes to submit when you have completed the module</li> <li>• complete Practice_Molecular Polarity &amp; Identifying IMF as a review of Molecular Polarity &amp; new information (IMF)</li> </ul>	<p>Edpuzzle: Mod 9_Video 2_Molecular Polarity &amp; IMFs</p> <p>DL Objectives_Chapter_11</p> <p>Notes_IMF Flow Chart.docx</p> <p>Practice_Molecular Polarity &amp; Identifying IMF</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> view &amp; answer embedded multiple choice while watching edpuzzle videos - grade will automatically transfer to Classroom when video is watched to the end &amp; show results button is checked</li> <li><input type="checkbox"/> picture of or electronically submitted completed Practice_Molecular Polarity &amp; Identifying IMF</li> </ul>
<p>Wednesday:</p> <ul style="list-style-type: none"> <li>• Watch Edpuzzle Video Molecular Polarity &amp; Intermolecular Forces</li> <li>• Save notes to submit when you have completed the module</li> <li>• Rewatch any previous Edpuzzle Videos</li> </ul>	<p>The Concord Consortium – Lab.Concord.org intermolecular-attractions - 2-comparing-dipole-dipole-to-london-dispersion</p> <p>TeachChemistry.org</p> <p>Intermolecular Forces 2020</p> <p>Attractions that exist between individual molecules</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> view &amp; answer embedded multiple choice while watching edpuzzle videos - grade will automatically transfer to Classroom gradebook from Edpuzzle when video is watched all the way to the end &amp; show results button is checked</li> <li><input type="checkbox"/> picture of completed</li> </ul>
<p>Thursday:</p> <ul style="list-style-type: none"> <li>• Read through Unit 7 (Ch. 11) PowerPoint Slide Show &amp; take notes to supplement Edpuzzle videos</li> <li>• Save notes to submit when you have completed the module</li> <li>• Watch Flinn At Home Science Video on Chemical Bonding</li> <li>• Complete Accompanying Flinn Chemically Bonded at Home Lab Student Worksheet &amp; Submit</li> </ul>	<p>DL_Unit 7_Intermolecular_Forces</p> <p>At-Home Labs_Student Guide</p> <p>FLINN At-Home Science Series: L3—Chemical Bonding</p> <p>Chemical Bonding At-Home Lab_Student Data</p> <p>Chemical Bonding At-Home Lab_Student Worksheet</p> <p>Key_Chemical Bonding At-Home Lab_Student Worksheet</p>	<p>:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> watched Flinn Lab Video &amp; submitted a picture of or electronically completed Chemically Bonded at Home Lab Student Worksheet</li> </ul>

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone at end of the week)
Friday: <ul style="list-style-type: none"> <li>Complete Google Form Distance Learning Content Check</li> </ul>	Google Form to be Posted Friday Morning	<input type="checkbox"/> completed Distance Learning Google Form <input type="checkbox"/> Submit notes on Edpuzzle videos

**Week criteria for success** (attach student checklists or rubrics): By the end of this week, students should have:

- ☐ watched Edpuzzle videos and responded to embedded video questions where appropriate
- ☐ taken notes on EdPuzzle videos **or** Unit 7 Chapter 11\_Intermolecular Forces & Solids & Liquids Slide Show & submitted to Google Classroom
- ☐ completed Polar & Nonpolar POGIL
- ☐ Completed Additional Practice\_Molecular Polarity Worksheet
- ☐ completed Practice\_Molecular Polarity & Identifying IMF
- ☐ completed completed & submitted ONLY Chemical Bonding At-Home Lab\_Student Worksheet
- ☐ completed Google Form Distance Learning Content Check

**Supportive resources and tutorials for the week** (plans for re-teaching):

- online virtual Q and A help sessions (see Google Classroom for times and invite codes)
- read and re-read the textbook
- watch and rewatch Edpuzzle videos
- practice worksheets and corresponding answer keys in Google Classroom