Unit 4 Study Guide
Key Terms and Ideas
Valence electrons
Lewis Dot Structure
-Bonding Pair e^- domain
- Lone Pair e^- domain

VSEPR
- 5 Shapes

Bond Polarity - Depends on EN

Molecular Polarity -Depends on shape
- Dipole

Intermolecular Forces
- London-Dispersion (All molecules)
- Dipole-Dipole (Only for polar molecules)

10 pts on the test will consist of a part from the VSEPR Lab.

Lewis Dot	Shape	Bond Sides Electron Dot Sides	Molecular Polarity	List the Intermolecular Forces

Study Guide Practice Problems

1. What is the difference between bond polarity and molecular polarity?

2. What effect do bonds and electron pairs around a central atom have on the shape of a molecule?

3. Can a molecule be non-polar but have polar bonds? Can a molecule be polar with non-polar bonds? Explain how each of these can happen with examples when necessary.

4. What is the relationship between molecular polarity and intermolecular forces?

5. What is the relationship between intermolecular forces and the melting point of substances? Sketch a graph to represent intermolecular forces and melting points.

10 questions of the test will be cumulative from the first 3 chapters. Question types include multiple choices, fill-in-the-blank, ordering, and matching. The 10 questions will come from

- Atomic Structure
    - Proton, neutron, electron
        - Charge
        - Location in the atom
- Periodic trends (atomic radius and ionization energy)
    - put in order…
- Periodic table organization
    - groups vs periods
    - Important groups (halogen, alkali metals, transition metals, non-metals just to name a few but know all the different parts of the table)
- Electron configuration
    - $1s^2 2s^2$…
- Naming and Writing
    - Regular Ionic, Transition metal ionic, or covalent