This section is best for reinforcing concepts if you want to study before the first week of classes.

Electronegativity

https://chemistrytalk.org/electronegativity-chart-trends/

This is a great written resource that explains why we care about electronegativity and its origin.

https://www.youtube.com/watch?v=Rr7LhdSKMxY

This resource is a video by Khan Academy that provides a visual of electronegativity while going more in depth on the concept. There is an example with H2O as well, which is very helpful in solidifying concepts using real examples.

Bonds

https://www.youtube.com/watch?v=QXT4OVM4vXI

This is a crash course video comparing bonds to relationships. It does an amazing job of relating the two while also exploring and reinforcing other concepts from this unit. If you are struggling a bit more with this concept, I would suggest watching this video at a slower pace, but it is an amazing resource that keeps you engaged. This video only goes over Ionic, Polar Covalent, and Nonpolar Covalent bonds.

https://www.youtube.com/watch?v=ovlL6Oo3pUA

This video goes over hydrogen bonds in less than 2 minutes. If you are struggling to understand how these bonds are different from H covalent bonds, watch this! Remember: Hydrogen bonds are NOT covalent bonds that contain H, instead they are attractions between 2 molecules that contain a bond of H to O or N.

https://www.youtube.com/watch?v=YeSuQm7KfaE

This video is a Ted Talk about Van Der Waals forces in Geckos. This resource does a great job explaining these forces using visuals and connecting it to a really interesting example. Even if this is a solid concept for you, this video is super cool to check out!

This section begins the class

Intermolecular Forces

https://www.youtube.com/watch?v=kttCCci7hRA

This video goes over Dipole-Dipole, Hydrogen Bonds, and London Dispersion forces. Note: This video does not talk about Ion Dipole forces, which are actually the STRONGEST force (he ranks the strength, but remember that Ion Dipole is the strongest but not listed). Otherwise, this video is a great resource.

https://www.youtube.com/watch?v=7HCAGSkK1Do

This is a Khan Academy video that goes over Ion-Dipole interactions. This goes over how these forces are different from Hydrogen Bonding using water molecules.

*1.*https://open.maricopa.edu/fundamentalsoforganicchemistry/chapter/intermolecular-forces/

2.https://courses.lumenlearning.com/suny-mcc-organicchemistry/chapter/intermolecular-forces-physical-properties-of-organic-compounds/

This is a free online textbook resource. It does a good job of going over what these forces are and linking them to examples. From this page, you can follow a link (listed below the first link) to find a more indepth resource. If you are curious about examples, going a bit more in depth, and accessing some practice, these links are for you. Note: some of the questions start getting into the next concept, so if you want to get a head start or are also looking to reinforce those concepts, this would work great.

Phase Changes, Enthalpy, Diagrams

https://www.youtube.com/watch?v=oc0ypeDELb0

This resource is a video that shows phase changes, enthalpies of fusion and vaporization, and phase diagrams. This video includes a quick practice problem at the end as well.

https://www.youtube.com/watch?v=udPzY15vH1w

This video goes in depth on phase changes, how to use enthalpy values to find heat, and what it means when we heat something to induce a phase change. It depends on the course, but for CHEM 1228, you may not be required to know the equation for heat (not complex), but it can be helpful to understand what is happening at the phase changes and on the diagrams.

https://www.youtube.com/watch?v=zFZ0yLRupfU

Practice problem using Enthalpy of Vaporization with Professor Dave. This video presents an example problem and then goes over how to solve it.

Problem: How much heat is required to vaporize 1.5000L of water at 37℃.

Density at 37℃= 0.9934g/mL

Enthalpy of vaporization at 37℃= 43.46kJ/mol.

Vapor Pressure

Vapor pressure | States of matter and intermolecular forces | Chemistry | Khan Academy

If you are struggling to understand why we care about vapor pressure, what it looks like, and how it can be applied, this is a great resource. This video by Khan Academy goes in depth on what molecules look like under different conditions and how this affects vapor pressure. It contains some excess graph information, but it is helpful information conceptually.

Boiling, Atmospheric Pressure, and Vapor Pressure

This video goes over why atmospheric pressure matters, how this affects vapor pressure and boiling, and explains boiling and vapor pressure using real examples.

https://www.youtube.com/watch?v=7T6aX3nNNaI

*Practice problem going over how to use the ln(P1/P2)=DeltaHv/R *(1/T2 - 1/T1) equation.*

Intermolecular forces and vapor pressure | AP Chemistry | Khan Academy

This video goes over conceptually ranking molecules on boiling point and vapor pressure by looking at IMFs. This would be most helpful to solidify concepts and think about application.