**Molecule Polarity**

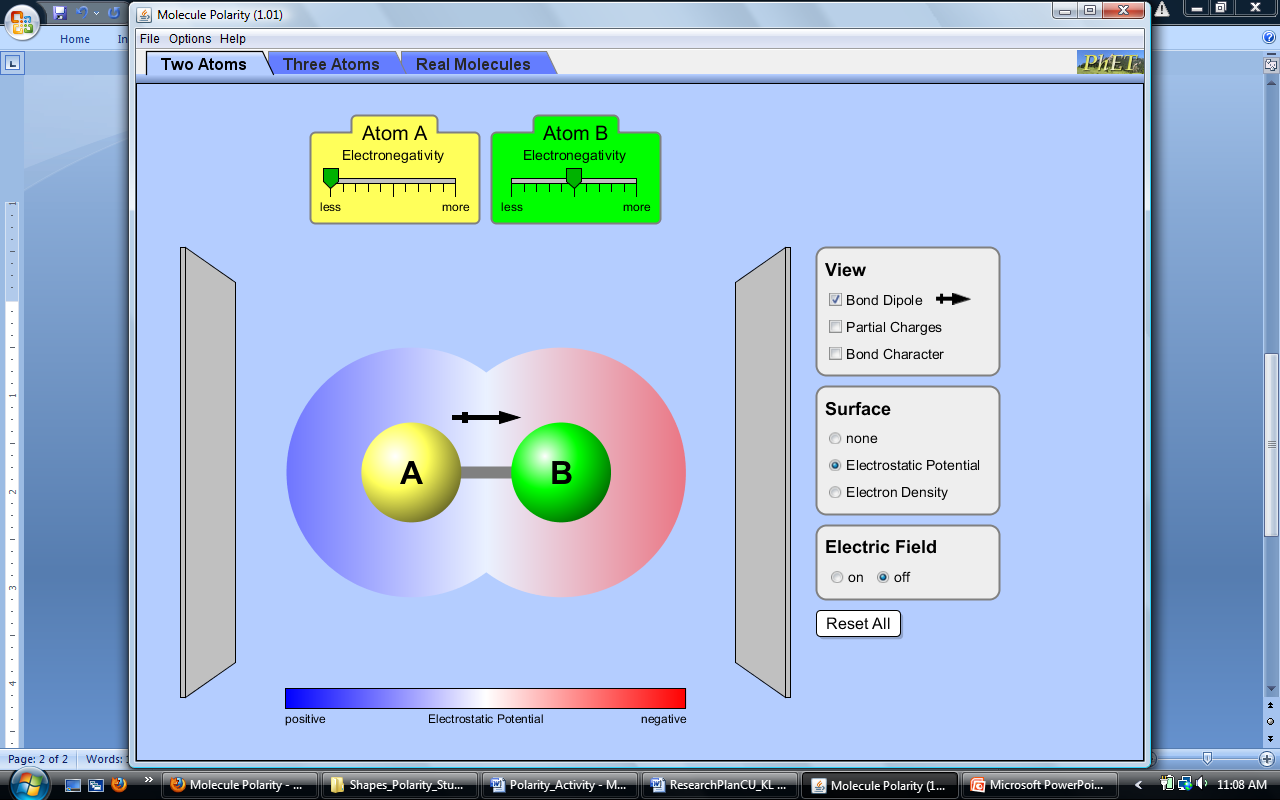
In this activity you will use a PhET simulation to explore molecule polarity.

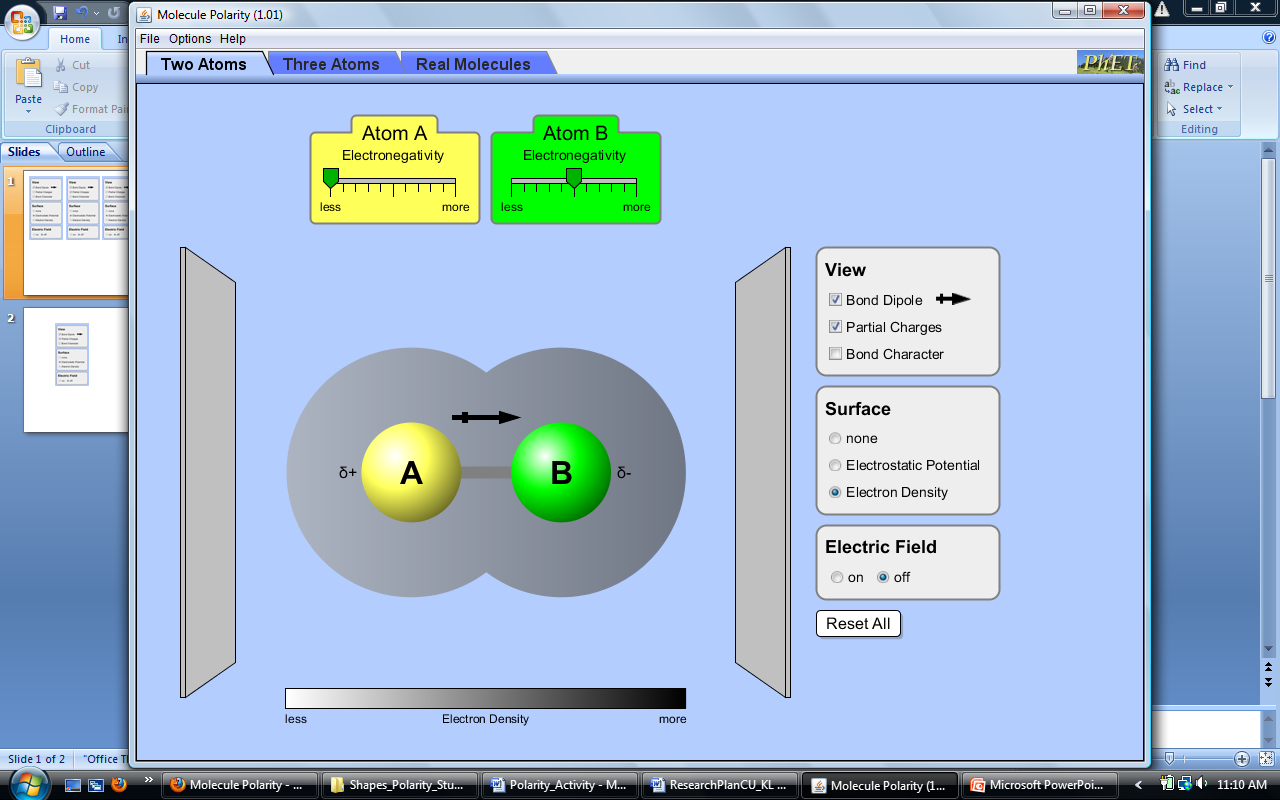
**Part I: What factors affect molecule polarity?**

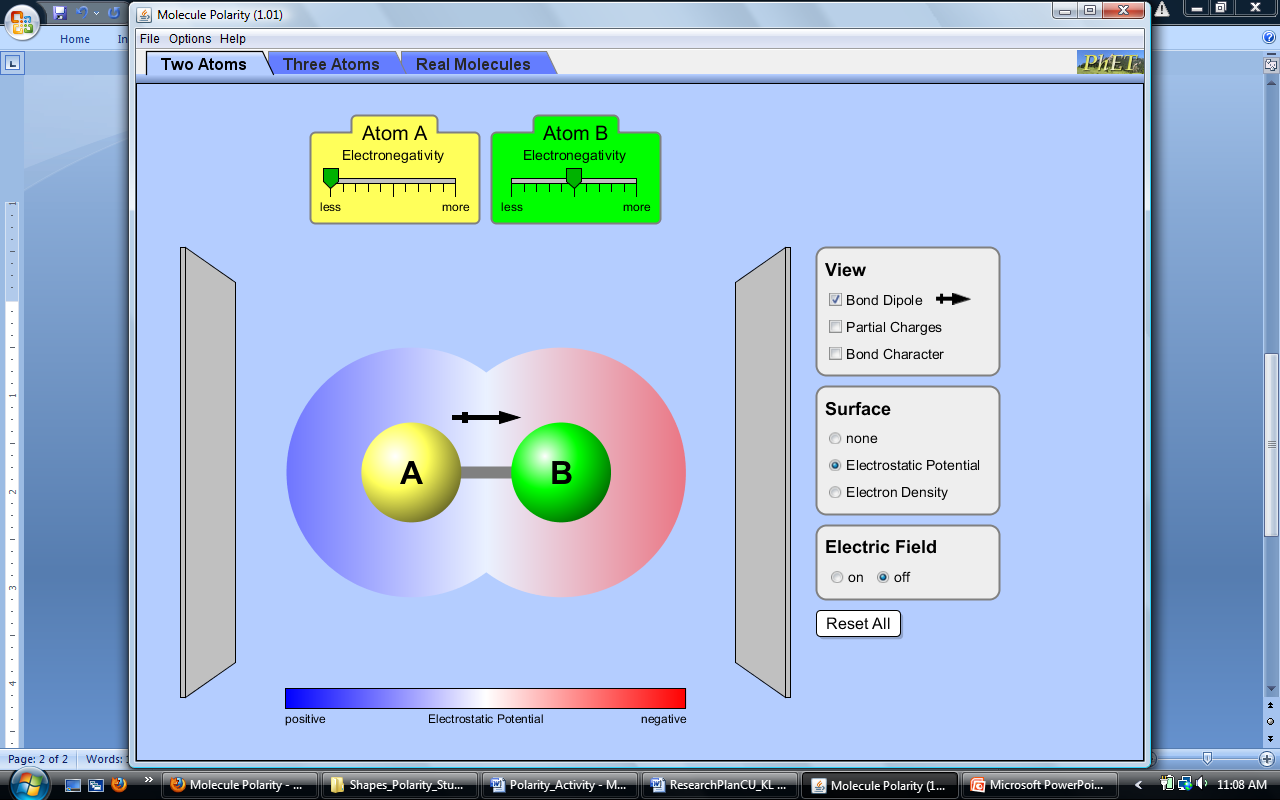
1. Explore the Molecule Polaritysimulation for a few minutes with a partner. In each of the three tabs, try to find all of the controls and figure out how they work.

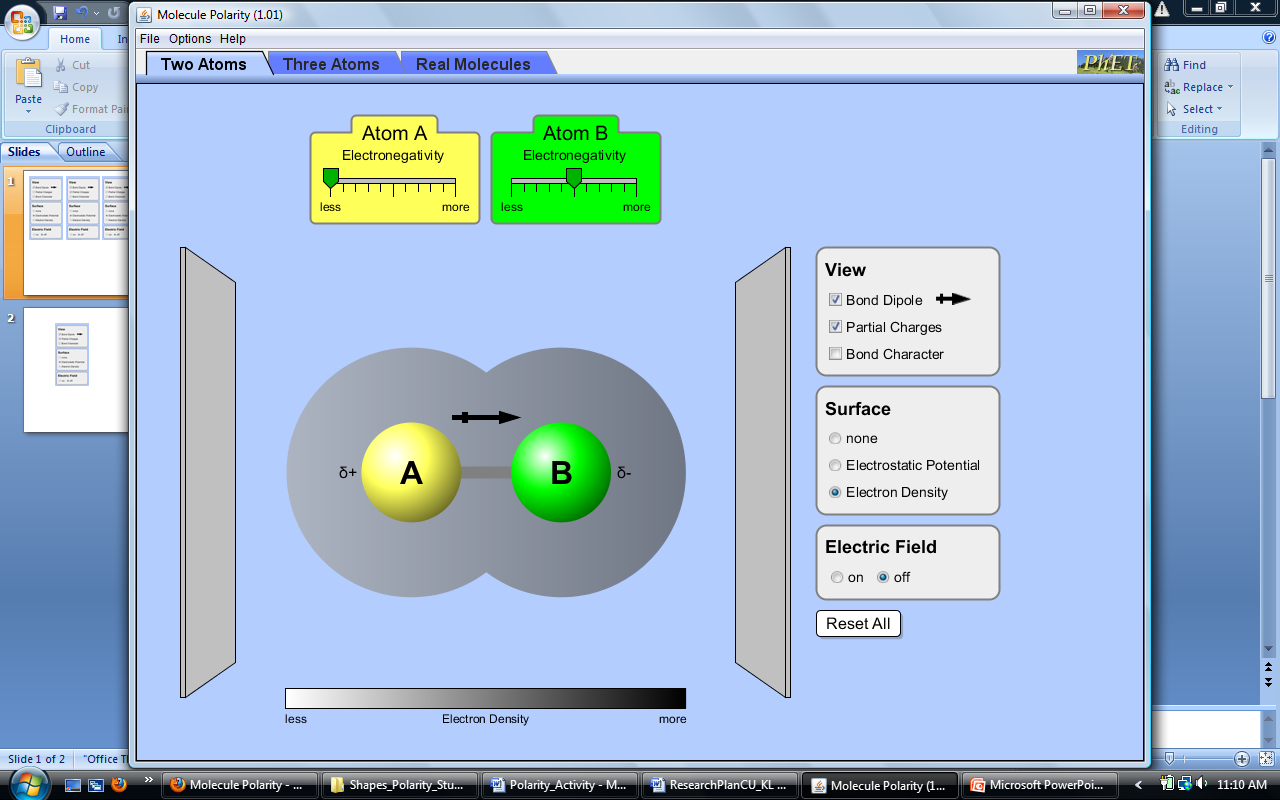
**Two Atoms** tab

1. Describe all of the ways you can change the polarity of the two-atom molecule.
2. Explain how the representations below help you understand molecule polarity.



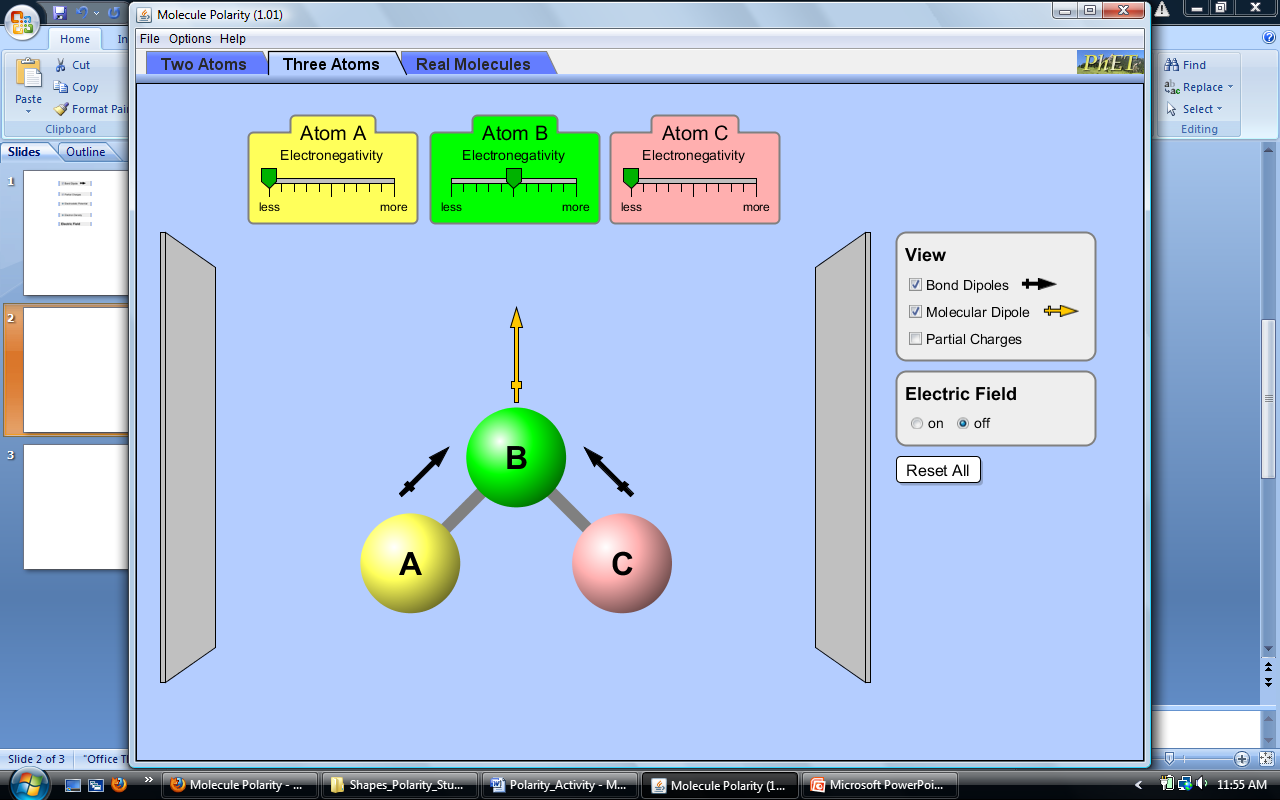






**Three Atoms** tab

1. Describe any new ways you can change the polarity of the three-atom molecule.
2. Explain the relationship between the bond dipoles and the molecular dipole.



1. Can a non-polar molecule contain polar bonds? Explain your answer with an example.

**Real Molecules** tab

1. **Predict** the polarity of 6 real molecules. First, draw the molecules and any bond dipoles. Then draw any molecular dipoles. Explain your reasoning before you check your predictions with the simulation.