**Learning Goals:** Students will be able to:

* Define bond polarity and molecular polarity
* Explain the relationships between bond polarity and molecular polarity
* Identify tools/representations to approximate bond and molecular polarity *(the periodic table, electronegativity, molecular shape, lone pairs, Lewis diagram, Ionic/covalent character)*
  + Use these common tools to approximate and compare polarity
* Use standard notation to indicate polarity
* Identify the bonds between atoms as nonpolar covalent, moderately polar covalent, very polar covalent, or ionic. The simulation uses “ionic character” for “very polar”. Students may need help with this; see the introduction below.

**Background:**

Students will have done Build a Molecule 1 PhET and Molecular Shapes 1 PhET.

***Molecular Polarity* Introduction:**

I will talk about the fact that the sim uses “Ionic Character” as a label for “very polar covalent”.; many college texts use the “ionic character” notation. I will remind students that this sim deals only with molecules, not ionic compounds. [Tips for Teachers](http://phet.colorado.edu/files/teachers-guide/molecule-polarity-guide.pdf) are provided by the PhET team.

**Lesson:** In college prep chemistry, the students will work in pairs during class or as homework.

**Post-Lesson:** I plan to use clicker questions included in this activity. For some of the questions, if I saw that the distribution of answers was great, I demonstrated the sim to help students after the first clicker response before I made any comments. Then I would have a “re-vote”. This stimulated lots of discussion between votes.