**<https://phet.colorado.edu/en/simulation/molecule-shapes>**



 Opening Screen:



 “CLICK” this symbol



 On the next screen, choose MODEL

**PhET Molecule Shapes html5**

 This screen will the appear:

Check the two “Name” tools and the “Show Bond Angles” box.

Play with the sim adding bonds and lone pairs.

Choose “Show Bond

 Angles” if desired.

***Explore the impact upon geometries by adding bonds, changing single to double bonds and triple bonds, adding and removing lone pairs of electrons, spinning the molecules, etc. Once a molecule is created, remove any lone electrons to observe what is “seen” when the molecule is magnified.***

***Spend just a few minutes here, confirming the shapes, bond angles, and geometry names used in class.***

***Part 2:***

Return to the Main Screen, and choose “Real Molecules”:

****** Check boxes:

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***This box allows you to choose between a selection of various molecules. Observe at least five of these molecules, spinning the molecules to better observe the 3-D structure of each and the bond angles.***