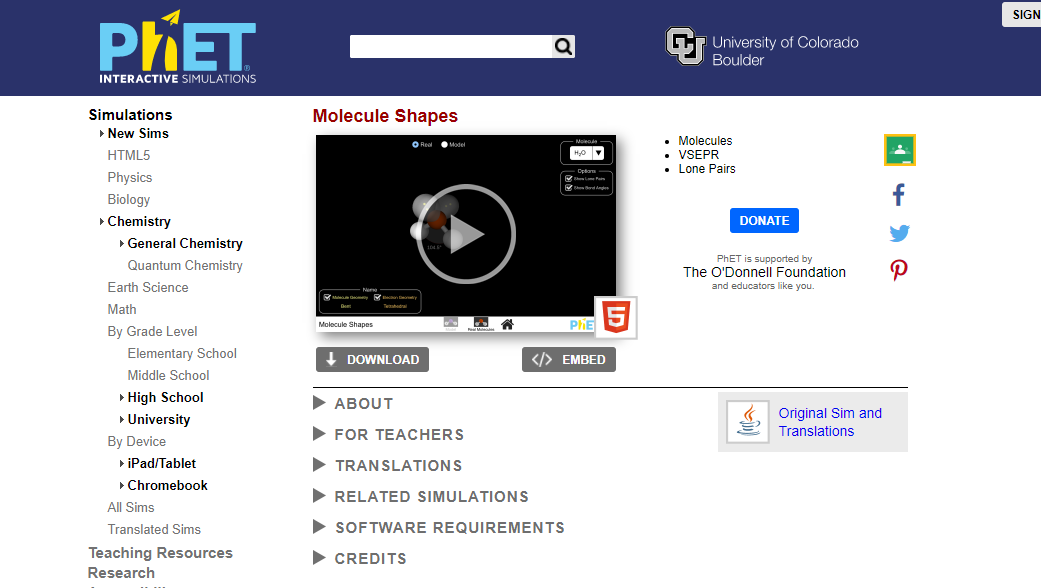
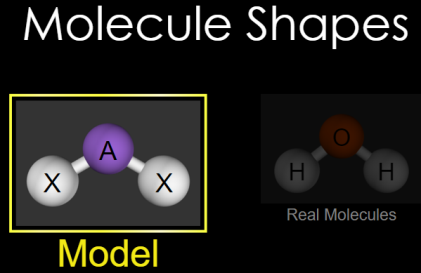
**<https://phet.colorado.edu/en/simulation/molecule-shapes>**



Opening Screen:

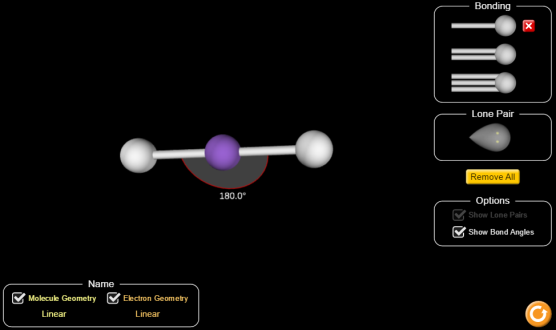
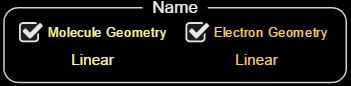


“CLICK” this symbol



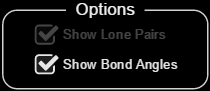
On the next screen, choose MODEL

**PhET Molecule Shapes html5**

 This screen will the appear:

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

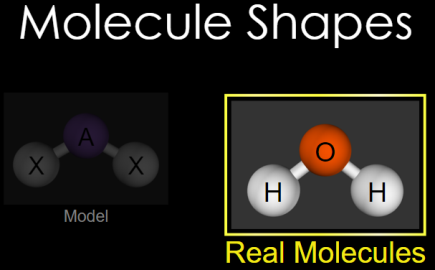
Play with the sim adding bonds and lone pairs.

Choose “Show Bond

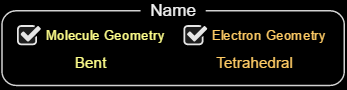
Angles” if desired.

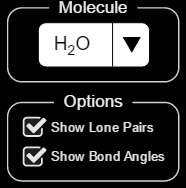
***Explore the impact upon geometries by adding bonds, changing single to double bonds and triple bonds, adding and removing lone pairs of electrons, spinning the molecules, etc. Once a molecule is created, remove any lone electrons to observe what is “seen” when the molecule is magnified.***

***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:

******

***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.***