Molecular Geometry "Lab"

Beginning question

What are the patterns between the number of electrons on the central atom and the shape of a molecule?

Procedure

1. Use the [pHET simulation on Molecule Shapes](#) to gather data. You will be using the Real Molecules instead of the model.
2. Make sure that Molecule Geometry and Electron Geometry (in the bottom left) and Show Lone Pairs and Show Bond Angles (upper right) are checked.
3. Examine the geometries and bond angles of real molecules and create a data table.
4. Develop a claim with your group and use evidence to support it.

Data

Your data table should include the molecule, number of lone pairs of electrons on the central atom, number of bonded groups on the central atom, the electron domain geometry, molecular geometry, and the angle between the bonds

Claim

Develop a claim with your group that relates the lone pairs of electrons and bonded groups on the central atom of a molecule to the molecule and electron geometry of that molecule.

Evidence and Reasoning

Use your data to support your claim.