

SCH 3UI Investigation 2-B Modelling Molecules

Complete the chart below using the compounds listed on the left side.

| Compound | Draw the Lewis Structure | 3-D -using the model kits create a 3-D version of compound -Draw in below | Name of Shape -Using the 3D molecule write the name of the shape below | Calculate the ΔEN for each type of bond in molecule -draw in partial charges and vector where appropriate | Polar OR Non polar Molecule, |
|---------------------|--------------------------|---|---|--|------------------------------|
| a) H ₂ | | | linear | $\Delta EN = 0$ | non-polar |
| b) Cl ₂ | | | linear | $\Delta EN = 0$ | non-polar |
| c) H ₂ O | | | bent | $\Delta EN = 1.24$ | polar |
| d) H ₂ S | | | bent | $\Delta EN = 0.38$ | non-polar |
| e) CS ₂ | | | linear | $\Delta EN = 0.03$ | non-polar |
| f) SiH ₄ | | | tetrahedral | $\Delta EN = 0.3$ | non-polar |
| g) PH ₃ | | | pyramidal | $\Delta EN = 0.01$ | non-polar |
| h) NH ₃ | | | pyramidal | $\Delta EN = 0.84$ | polar |