Describing and explaining the shape of molecules (Level 2) exam tips

In your NCEA written exam answer.

• State exactly which atom is the central atom.

• Count and state the number of regions of electron density around the central atom.

“These regions arrange themselves with maximum separation in order to minimise repulsion.”

• Refer to the parent geometry and bond angle.

• Identify the number of bonding and non-bonding regions.

Finally, state the overall shape.

Here is a comment from a previous examiners report...*"When explaining the shape of a simple molecule, candidates should demonstrate the understanding that each pair of valence electrons around the central atom repels every other pair of electrons. The molecule is most stable when these repulsive forces are at a minimum, ie. the electron pairs around the central atom are as far apart as possible".*

Don’t be daft.

Don’t write about maximum repulsion, write about MINIMUM repulsion between pairs of electrons.

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