Curiosity: Shape Changes the Whole Molecule

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Polar bonds do not automatically make a polar molecule. The three-dimensional arrangement matters: equal, opposite bond dipoles can cancel, while a bent or pyramidal shape may leave a net imbalance. VSEPR is a useful introductory model for these comparisons. It does not provide exact angles, electron probability maps, or every property.

Think like a chemist

1. Why is CO_2 nonpolar despite polar C–O bonds?
2. Why does H_2O not cancel similarly?
3. What does a dipole arrow simplify?

Word	Meaning	Packet
VSEPR	domain-repulsion shape model	1–7
bond polarity	uneven attraction in one bond	8–11
molecular polarity	overall shape-dependent result	9–10, 17–19

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