

This Class

3.2 LCP

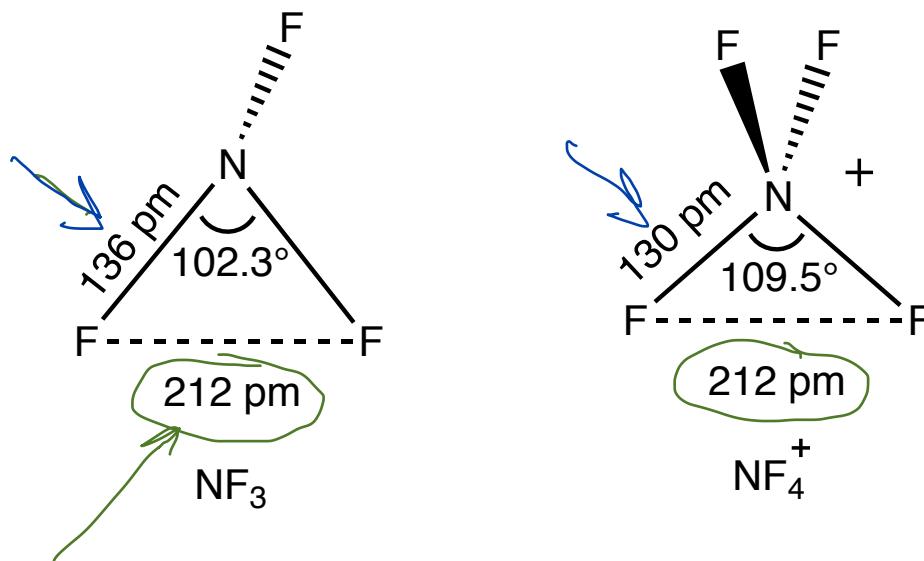
3.3 Molecular Polarity

Next Class

3.3 Molecular Polarity

4.1 Symmetry elements and
Operations

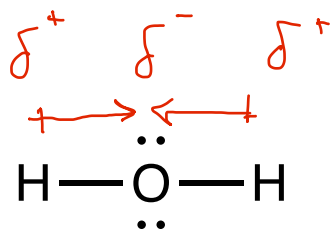
(the atom bonded to a central atom



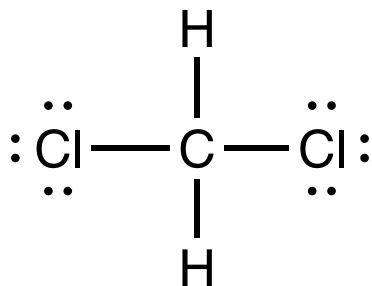
F atoms will maintain the same distance from each other... because they pack as closely together as they can

Polarity

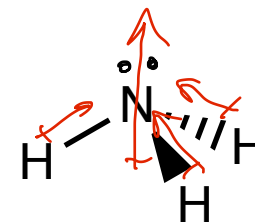
Section 3.3



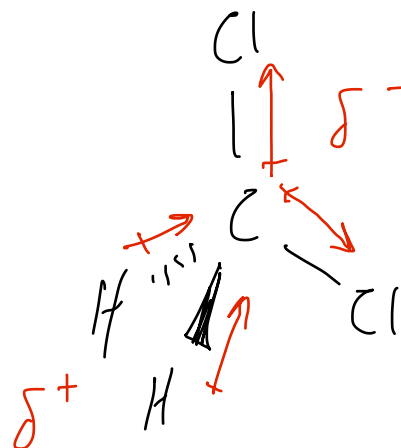
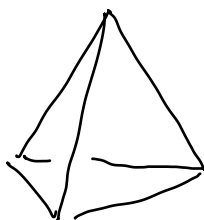
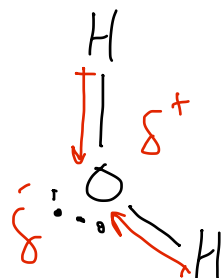
polar
1.85 D



polar
1.6 D



polar
1.47 D



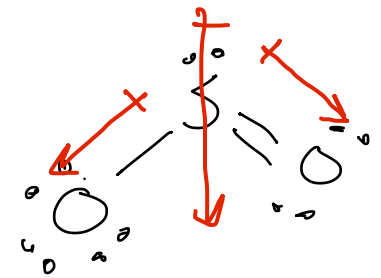
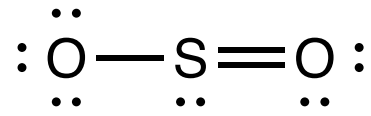
Polarity

Draw Lewis Structure

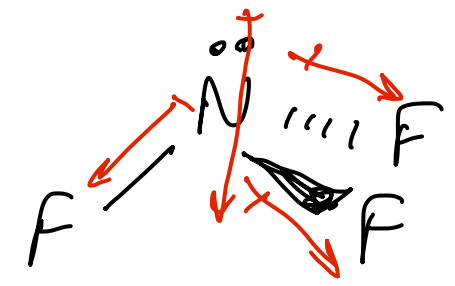
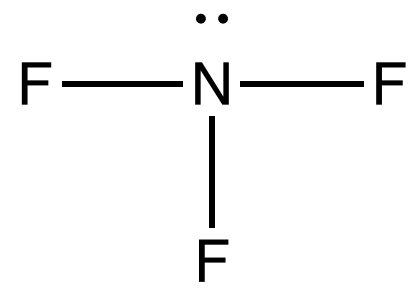
Predict Shape

Find polar bonds

3 sets of e⁻'s ... e⁻ trig planar
Section 3.3



4 sets of e⁻'s ... e⁻ tetrahedral



Polarity

Draw Lewis Structure

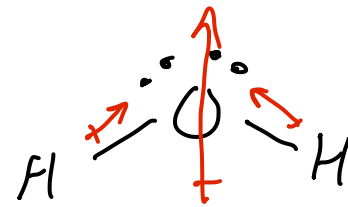
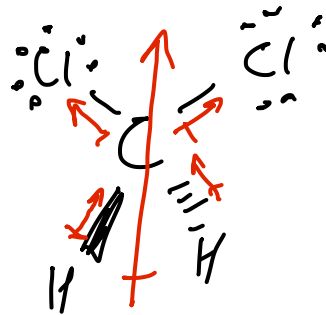
Predict Shape

Find polar bonds

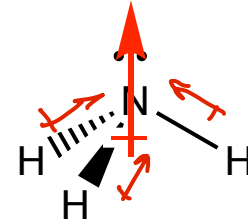
Does the prediction based on polar bonds match the position of the lone-pair e⁻?

Yes, safe to predict

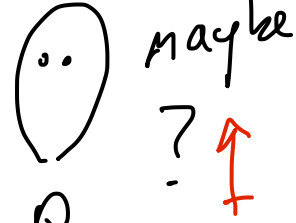
No, dipole arrow puts + charge on lp e⁻'s. It's not safe to make the prediction



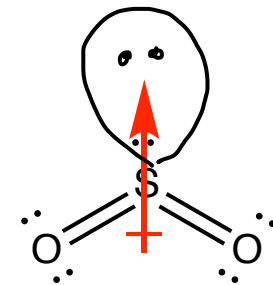
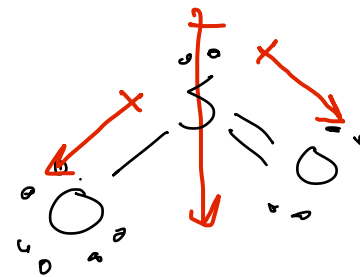
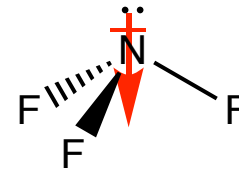
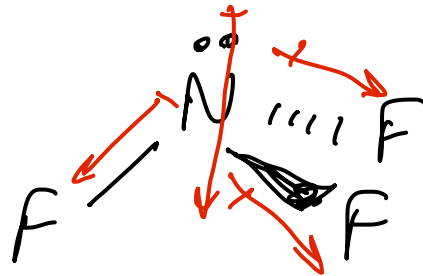
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1.47 D



0.23 D



1.63 D

1	2	3	4
5	6	7	8

1	2	3	4
5	6	7	8