Guidelines for drawing Lewis dot structures

1. H can form only one bond. It is always a terminal atom.

2. Halogens or oxygen are usually terminal atoms. When bonds are formed between halogens and oxygen, oxygen is the terminal atom.

3. The atom with the lowest electron affinity is the central atom in a molecule or ion.

4. Count the number of valence electrons. Convert this to valence electron pairs.

5. Place one pair of electrons between bonded atoms (this forms a σ bond).

6. Subtract from the valence electron pairs, the number of bonds you made in (5) above. This gives you the electrons left to form lone pairs or π bonds.

7. Place lone pairs about each terminal atom (except H) to satisfy the octet rule. Satisfy the octet rule for the most electronegative element first.

8. If electron pairs are still remaining, assign them to the central atom. If the central atom is from the third period or higher, it can accommodate more than 8 electrons.

9. If the central atom does not have 8 electrons around it, convert one or more terminal atom lone pairs to π bonds. Remember that π bonds are usually formed by C, N, O and S.