These Part 1 exercises should be completed before the workshop. They will be collected at the beginning of the period.

1. Draw Lewis structures for each of the following molecules. Include all important contributing structures. Indicate which of your contributing structures are the major contributors. Don't forget to include your formal charges. When you have finished drawing your Lewis structures draw a single three dimensional drawing representing the molecular structure using wedges and dashes as needed.

   a. ozone, O₃

   b. nitromethane, CH₃NO₂

   c. bicarbonate anion, HCO₃⁻¹

   d. diazomethane, H₂CNN

   e. thionylchloride, SOCl₂

   f. CH₃COCH₃, acetone
2. For each of the molecules shown below one Lewis structure is given. Draw additional contributing structures in the space indicated. Use the curved arrow notation to show how you can convert one Lewis structure into the next as you move from left to right across your diagram.

Example:

```
        O
        H-C-N
        H
H       O               H       O
        C
H       H               H       H
        O
        C
        H
```

(a.)

```
        O
        H-C-N
        H
H       O               H       O
        C
H       H               H       H
        O
        C
        H
```

(b.)

```
        O
        H-C-C
        H
H       H               H       H
        O
        C
        H
```