**Air Pollution Class Work/Homework  
Part I: Smog and CFCs**

(implying that, yes, you are doing some of this in class)

1. **Answer the following questions about general Air Pollution.**
   1. Name the four major forms of air pollution, and where they come from.
   2. Name three examples of places/things in your household that could contribute to air pollution. With each example, explain what the major pollutant(s) is/are?
   3. What is the difference between a primary pollutant and a secondary pollutant? Give an example.
2. **Answer the following questions about Smog.**
   1. What is smog? What are the two types and the major difference between the two?
   2. What sorts of things influence the amount of smog in a particular place?
   3. Show the chemical process of smog as the day progresses in a major metropolitan area. (APES only)
   4. Draw a comparison picture between normal air circulation and temperature inversion. Describe in the picture what we are noticing.
   5. What are heat islands? Why do they form?
3. It has been observed that the emission of photochemical smog is approximately 50 kg of NO2 per year per 100 humans.
   1. What gas is the main component of photochemical smog? What properties does it have (think color)?
   2. Where does photochemical smog come from?
   3. How does photochemical smog differ from industrial smog?
   4. Convert 50kg/year into grams per day.
   5. Given a density of 400,000 humans per hectare in the city of LA, calculate the amount of smog emitted, in kilograms, by humans inhibiting a 15,000 m2 city. (1 hectare = 10,000 m2)
4. CFCs have a long life-span, approximately 150 years, and are still in Earth’s atmosphere despite regulations like the Montreal Protocol. The amount of CFC emissions currently in the air above San Francisco is approximately 6500 grams of CFC per year per 10 humans.
   1. What does CFC stand for? Describe using the four steps why CFCs are a problem.
   2. Describe why CFCs are bad for the Ozone Layer.
   3. Given a density of 800,000 humans per hectare of San Francisco, calculate the amount of CFCs emitted, **in grams**, by humans inhabiting a 6900 m2 city. (1 hectare = 10,000 m2).