104 Period 16: Chemical Energy – Consequences of Its Use

1. Watch the demonstration involving particulate matter from candles and other sources.  
   a) Which source(s) caused the most particulate matter?  
   b) What do you think the "soot" or particulate matter is made of?

2. a) How can we use lasers to detect particulate pollution?  
   b) What is an electrostatic precipitator and how does it work?

3. a) What is meant by "incomplete combustion?"  
   b) What kind of pollution forms as a result of it?  
   c) What can be done to correct incomplete combustion?

4. a) Why is carbon monoxide dangerous?  
   b) How can it get into your home?  
   c) How can it be detected?
5. a) What is acid rain and what causes it? b) What harm does it do?

6. What is photochemical smog and what causes it? What harm does it do?

7. Is ozone helpful or harmful or both? Explain.

8. a) On a sunny day, how does the temperature of air near the ground compare with the temperature of air higher up? Why? b) Does hot air sink or rise and what role does this motion play in the temperature structure of the atmosphere? c) What is an inversion and why are inversions an important consideration in the study of pollution?