Atmosphere Layers Questions

1. Label and draw where the following occur: auroras borealis, meteors burn up, tallest mountain on Earth, most commercial airplanes fly, weather takes place, manned helium balloons, hot air balloon record, spy planes, the ISS (space station), global positioning satellites.
2. After you have completed your lab, answer the following questions: use your Atmosphere notes, your lab, and the internet for help if it's needed. You do not need complete sentences.
    a. What gas comprises most of the atmosphere? 2nd most?
    b. What other variable components make up the composition of the atmosphere?
    c. Identify at least one interesting fact about each layer.
    d. The four layers of the atmosphere are divided by what characteristic?
    e. What layer of the atmosphere has most of the world's weather?
    f. Why does air temperature decrease in the troposphere?
    g. Why does air temperature increase in the stratosphere?
    h. Why does air temperature decrease in the mesosphere?
    i. Why does air temperature increase in the thermosphere?
    j. What would happen to the troposphere if carbon dioxide were removed from air? Remember, CO_2 is a key greenhouse gas. Give at least 2 different answers to what could happen in CO_2 was gone from the troposphere.
    k. How are human activities affecting the atmosphere? A detailed explanation is needed. (hint pg 478)
    l. What important UV absorbing gas is found in the stratosphere? What's been happening to it?
    m. Explain how the temperature of Earth's atmosphere changes as you increase altitude.
    n. If the average normal temperature decrease with altitude in the troposphere is 6.5°C/km, calculate the approximate temperature at 6,000m if the surface temperature is 16°C.
    o. For each layer, explain 2 different ways a human could die in that layer. Give an explanation that shows how and why that layer could kill a human.
    p. Compute the volume of the classroom by multiplying the height x width x length to get the cubic meters or feet. How much nitrogen and oxygen are in the classroom? (remember you already know the rough percent of each gas in the atmosphere)
    q. How does the Mesosphere protect life on earth?
    r. How does the Stratosphere protect life on earth?
    s. How does the Troposphere protect life on earth?
    t. After thinking about the state of our present atmosphere, predict what you think our atmosphere will be like in the year *2035*. Will it be the same? worse? better? What makes you think this?