The Air Around You

1. **5 Major Components** of air that are *important to you*
   1. Nitrogen = 78% of the atmosphere; stays constant; plants and bacteria need it
   2. Oxygen = 21% of the atmosphere; produced by photosynthesis
   3. Water Vapor = produced by evapotranspiration; all living organisms need it
   4. Ozone = O3; absorbs harmful UV radiation
   5. Particulate = tiny solid particles such as pollen, minerals, salt, ash, and dust
2. **4 Important Factors** of air that are *important to you*
   1. Survival = respiration & photosynthesis & water cycle
   2. Energy **=** wind (movement of air)
   3. Protection **=** ozone layer; 20% of solar energy is absorbed by clouds, dust, & gases; 30% of solar energy is reflected by clouds, dust, gases, & Earth’s crust
   4. Greenhouse Effect **=** absorption and reradiation of solar energy = perfect temperature & insulation
3. **Layers of the Atmosphere** and why they are *important to you*
   1. Troposphere = lowest layer; “turning” or “changing” layer; where weather happens; contains 75% of all the gases in the atmosphere
   2. Stratosphere = the layer where the ozone is concentrated
   3. Mesosphere = “middle” layer; coldest layer
   4. Thermosphere = “heat” layer; temperatures can reach more than 1000°C; contains the ionosphere that is responsible for auroras
   5. Exosphere = “outer” layer that blends into space
4. **Concerns About the Air** that are *important to you*
   1. Ozone depletion = from CFCs (chlorofluorocarbons) from refrigerators, air conditioners, & exhaust. **The impact**: reduced UV protection = increase in skin cancer
   2. Pollution = from the burning of fossil fuels (automobiles, transportation, industry) **The impact**: poor air quality = increase in respiratory disease & other diseases; temperature inversion
   3. Global warming = increase in CO2 levels from burning fossil fuels & deforestation; CO2 traps heat. **The impact**: warmer temperature = melting polar ice caps which would raise sea levels; shift in weather patterns