**The Atmosphere**

***FIRST Read p. 249 – 257***

1. Why does a mountain climber need an oxygen supply at very high altitudes, even though the air still contains 21% oxygen?
2. The layers of the atmosphere are defined by changes in temperature. Fill in the chart below:

|  |  |  |
| --- | --- | --- |
| **Layer** | **Air Pressure** | **Temperature** |
| Thermosphere | Decreases |  |
| Mesosphere |  |  |
| Stratosphere |  |  |
| Troposphere |  |  |

1. On page 254, how did the ozone layer over the South Pole change between 1979 and 2008? Explain the evidence that supports your claim.
2. Draw your own version of how greenhouse gases keep Earth warm.

**Review**

1. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a mixture of gases that surrounds Earth
2. The measure of the force with which air molecules push on a surface is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the process by which gases in the atmosphere absorb and reradiate heat.
4. Name three gases in the atmosphere: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. What layer of the atmosphere contains the ozone layer?
6. What layer of the atmosphere contains almost 80% of the atmosphere’s total mass?
7. How and why does air pressure change with altitude in the atmosphere?
8. What is the name of the uppermost layer of the atmosphere? Why does it feel cold there even though the temperature can be very high?
9. What would happen to life on Earth if the ozone layer was not present? Explain your reasoning.
10. A friend says that temperature increase as altitude increases because you’re moving closer to the sun. Is this true? Explain the evidence that supports your claim
11. Why would increased levels of greenhouse gases contribute to higher temperatures on Earth?