

Name _____

Atmospheric Layers

1. Based on the given data, lay out the axes of your graph, such that you use as much of the graph as possible.
2. Use a pencil to graph the data.
3. Identify the following transition zones on your graph: tropopause, stratopause, mesopause.
4. Identify the following layers on your graph: troposphere, stratosphere, mesosphere, thermosphere.
5. Label the ozone layer on your graph.
6. After completing the graph, answer the accompanying questions.

Altitude (km)	Temperature (deg C)
0	32
5	0
10	-70
15	-80
20	-72
25	-50
30	-32
35	-20
40	-15
45	-12
50	-10
55	-22
60	-35
65	-51
70	-60
75	-75
80	-85
85	-92
90	-100
95	-95
100	-90
105	-62
110	-5
115	40
120	80

Questions:

1. Why does the temperature decrease with altitude in the troposphere?

Why does it increase with altitude in the stratosphere?

Why does it decrease in the mesosphere?

Why does the temperature increase in the thermosphere?

2. What role does the ozone play in the stratosphere? It is said that ozone plays dual roles as “good cop” and “bad cop”. Explain.
3. The thermosphere plays an important role in protecting the Earth. Explain.
4. In what layers/transition zones do the following phenomena generally occur?
 - a. Meteors begin to burn up
 - b. Aurora Borealis appears
 - c. Weather occurs
 - d. Jet streams
5. What are the components (by %) of gases in the “air” of the troposphere?
6. For each of the gases you listed give its concentration in parts per million (ppm).