**Layers of the Atmosphere** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hour \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Directions**: Follow the below guidelines while completing your layers of atmosphere assignment.

1. Partner read p. 426-433. Be sure Ms. Murphy hears you summarizing after each paragraph.

2. When your finished raise your hand and Ms. Murphy will give you your activity.

3. Read the background information. Talk to the text while you are reading.

**Background**

The atmosphere can be divided into four layers based on temperature variations. The layer closest to the Earth is called the troposphere. Above this layer is the stratosphere, followed by the mesosphere, then the thermosphere.

Temperature variations in the four layers are due to the way solar energy is adsorbed as it moves downward through the atmosphere. The Earth's surface is primary absorber of solar energy. Some of the energy is re-radiated by the Earth as heat, which warms the overlying troposphere.

The temperate begins to increase with altitude in the stratosphere. This warming is caused by a form of oxygen called ozone (O ) absorbing ultraviolet radiation in the form of the sun. Ozone protects us from most of the sun's ultraviolet radiation, which can cause cancer, genetic mutations, and sunburn. Scientist are concerned that human activity is contributing to a decrease in stratosphere ozone. Nitric oxide, which is the exhaust of high-flying jets and chlorofluorocarbons (CFCs), which are used in refrigerants, may contribute to ozone depletion.

At the stratopause, the temperature stops increasing with altitude. The overlying mesosphere does not absorb solar radiation, so the temperature decreases with altitude.

4. Have Ms. Murphy stamp here to show that you have read the background \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Plot the data found in TABLE 1 on your graph. (You have 22 points)

6. Label the -Troposphere 0-10 k -Stratosphere 10-50 km

-Mesosphere 50-85 km -Thermosphere 85-500km

-Ionosphere (lower thermosphere) -Exosphere (upper thermosphere)

7. Shade each layer of the atmosphere a different color

8. Make a key on your graph and add a symbol for each of the following. Draw them in color on your graph in the layer of the atmosphere they belong.

-Satellite -Meteorite

-Plane -Weather

-Ozone layer

Orange **Layers of the Atmosphere** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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5. Label the – 1st layer = Troposphere - 2nd layer = Stratosphere

3 layer = Mesosphere -5th layer = Thermosphere 85-500km

-4th layer Ionosphere - 6th layer =Exosphere

7. Shade each layer of the atmosphere a different color

8. Color and cut these pictures, paste them into the correct layer of the atmosphere.