



# Up, Up, Up in the Air



Name \_\_\_\_\_

Class \_\_\_\_\_

There is not a definitive line that marks the end of the atmosphere and the beginning of space. For this activity we will use the Karman line, 100 km above sea level. At this height there is not enough air to support aeronautical flight. This is one way to define the edge of the atmosphere.

**Use the chart on the next page, or grid paper, to label the layers of the atmosphere. Then draw or write where different things can be found in the atmosphere. For a bonus, add other things not listed below.**

## Layers of the Atmosphere

### **Troposphere - 0 km to about 10 km**

*This layer contains virtually all weather and clouds. It has 99% of the water vapor in the atmosphere. The jet stream (fast wind circulated the globe) is in the upper troposphere.*

### **Stratosphere - about 10 km to 50 km**

*This layer contains the ozone layer. Commercial planes usually fly in the lower stratosphere.*

### **Mesosphere - about 50 km to 85 km**

*This layer burns most meteors. It is extremely cold in the mesosphere.*

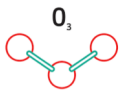
### **Thermosphere - 85 km to over 100 km**

*This layer absorbs UV radiation and X rays from the sun. The aurora occurs in the thermosphere.*

## Where are they?

Draw or write where these things can be found in the atmosphere:

**ozone**



**birds**



**northern lights**



**smog**



**Cirrus clouds**



**Meteors**



**cumulus clouds**



**jet stream wind**



**X rays**



**airplanes**



**ionosphere**



**weather balloons**



# Layers of the Atmosphere

100 km

90 km

80 km

70 km

60 km

50 km

40 km

30 km

20 km

10 km

0 km