

Layers of the Atmosphere

Name _____ Block _____

Directions:

1. Label each layer.

*Troposphere	0-16 km	
Tropopause		16 km
*Stratosphere	17-48 km	
Stratopause		48 km
*Mesosphere	49 - 80 km	
Mesopause		80 km
*{Thermosphere}	81 - ?? km	
Ionosphere		96 - 112 km
*Exosphere	beyond 600 km	

2. Sketch symbols of the characteristics of the atmosphere onto the correct layers.

Aurora Borealis	80 - 500 km	Meteors	80 - 500 km
Jet Airplane Travel	<6 km	Cumulonimbus Clouds	16+ km
Cirrus Clouds	16 km	Manned Balloon	48 km
Flock of Geese	8.1 km	NASA spacecraft	240 km
Mt. Everest	12 km	Radio Waves	1050 km
Ozone Layer	20 - 30 km	Coldest region	82 km
Where you live	0 km	Where most satellites orbit	>600 km

3. Add temperatures by drawing a zig-zag line from the surface to the Van Allen Radiation Belt, following the transparency.

Questions:

1. List the four main layers of the atmosphere and calculate their thicknesses:

2. Which is the thickest? _____ Thinnest? _____

3. Look at the transparency. The four layers of the atmosphere are separated by thinner layers called "pauses." Describe the change that occurs in the pattern of atmospheric temperatures at the "pauses." _____

4. At what elevation does the coldest temperature occur? _____
 What name is given to this point in the atmosphere? _____
 What is the temperature at this point in the atmosphere? _____

5. Why are clouds generally observed to form only in the troposphere? Take your best guess!

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