

Earth's Atmosphere

Directions: Answer the following questions as you read pages 426-427 in your textbook.

- Why is the atmosphere important to us? (Circle ALL that apply)
 - It contains the oxygen we need to breath.
 - It keeps the clouds close to the Earth.
 - It protects us from the sun's harmful rays.
 - It holds us onto the Earth's surface.
- True or False: The atmosphere contains some solids. Give an example: _____.
- _____ is the most abundant gas in Earth's atmosphere.
- _____ is the SECOND most abundant gas in Earth's atmosphere.
- True or False: Water is the most abundant liquid in Earth's atmosphere.
- True or False: Gravity holds the atmosphere around the Earth.
- Differences in temperature between layers of the atmosphere are mainly due to the way _____ is absorbed by gases as it moves downward through the atmosphere.

Directions: Answer the following questions as you read pages 430-431 in your textbook.

- In which of the following atmospheric layer(s) does temperature decrease as altitude increases? (Circle all that apply)
 - Troposphere
 - Stratosphere
 - Mesosphere
 - Thermosphere
- The air pressure of the Earth's atmosphere becomes _____ as you move away from the Earth's surface. (greater or lesser)
- Most of the mass of the Earth's atmosphere is in the _____. (troposphere or thermosphere)
- True or False: You live in the troposphere.
- The ozone in the atmosphere absorbs _____ (UV rays or gamma rays).
- The coldest layer of the atmosphere is the _____.
- Give two reasons why the ozone layer is vital or necessary for having life on Earth.
- Complete the sheet on the back using information you collected about Earth's atmosphere.**

Name: _____

Date: _____

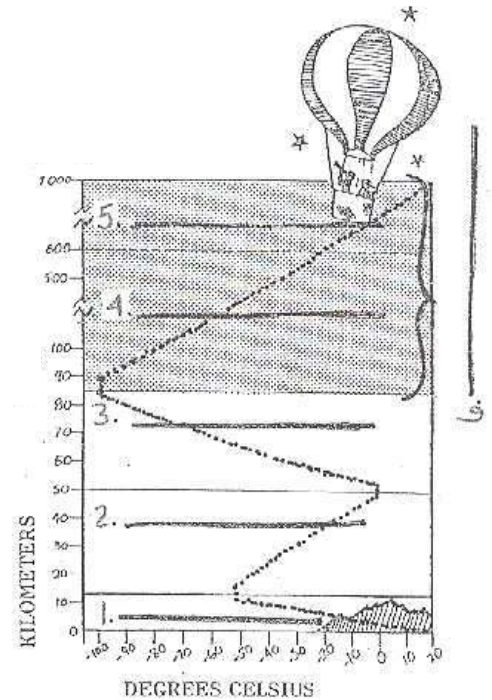
THE AIR UP THERE

Period: _____

Zac and Zeke want to explore Earth's atmosphere. They think their amazing balloon can take them high enough to learn all about the atmosphere. Are they right? Here are some things they'll need to learn before they get too far.

- A. Label the layers of the atmosphere on the picture: ionosphere, troposphere, exosphere, thermosphere, stratosphere, mesosphere.
- B. Using the graph below and your notes, tell what layer or feature is described in each phrase below. Use the following: TR for troposphere, TH for thermosphere, M for mesosphere, S for stratosphere, EX for exosphere, I for Ionosphere.

7. _____ contains dust, water vapor, clouds, and air that we breathe
8. _____ extends from the surface of the Earth to about 15 km
9. _____ contains 90% of the atmosphere's stuff (Most dense layer)
10. _____ where airplanes like to fly because it is above the weather
11. _____ layer with the coldest temperature: -100°C
12. _____ layer extends 85 km above Earth into space
13. _____ 2 layers with temperatures that decreases with increasing height
14. _____
15. _____ layer where meteors burn up before reaching the Earth
16. _____ 2 layers with temperatures that increase with height
17. _____
18. _____ most of the ozone layer is found in this layer
19. _____ the layer where all weather occurs
20. _____ part of thermosphere that is filled with electrically charged particles, causes the Northern lights (Aurora Borealis)
21. _____ part of thermosphere where you will find the planets
22. _____ part of thermosphere where radio waves are reflected back to earth for communication
23. _____ lower part has temperatures -50°C , upper temperatures are 0°C
24. _____ extends 50-85 km above Earth's surface
25. _____ satellites orbit in this part of the thermosphere
26. _____ where life exists
27. _____ extends from about 15 km to 50 km above Earth
28. _____ layer has 2 parts
29. _____ layer closest to Earth
30. _____ very strong winds found here
31. _____ thinnest and hottest layer



32. The _____ is a mixture of gases (air) that surrounds the Earth.
33. Why is the ozone layer so important to us? _____
34. Nitrogen makes up _____% of our air.
35. Oxygen makes up _____% of our air.
36. Water vapor, carbon dioxide, dust, and all other gases make up _____%.

