

Chapter 11 Section 1 Guided Reading

1. What is Earth's atmosphere?
2. Describe how nitrogen moves through planet Earth, including Earth's inhabitants.
3. Create a pie graph that represents the *relative* amounts of different gases that make up Earth's atmosphere.
4. Complete the table that compares Earth's atmosphere to other planets in the solar system.

Planet	Major gases			
	CO ₂ -	N ₂ -	H ₂ O - .1%	
Earth	CO ₂ - .04%	N ₂ -	O ₂ -	Ar - .93%
Mars	CO ₂ - 95%	N ₂ - 3%	Ar -	

5. The reason Earth is so different from the other planets has to do with the process of _____.

6. Through photosynthesis, _____ is used by plants and other living organisms, and _____ is used by humans.
- a) CO_2 , N_2
 - b) CO_2 , O_2
 - c) O_2 , CO_2
7. Atmospheric pressure is a measurement of the _____ of air molecules per unit _____ in the atmosphere at a given altitude.
8. The pressure at sea level on a person is about _____ pounds!
- a) 9,800
 - b) 1,000
 - c) 2,200
9. Draw the graph of air pressure vs. altitude.
10. Air pressure _____ as altitude _____.
- a) decreases, increases
 - b) increases, increases
 - c) remains constant, increases
11. Air molecules are _____ packed at sea level.
12. An instrument that measures air pressure is called a
- a) hygrometer
 - b) barometer
 - c) anemometer

13. Draw the mercury barometer in Figure 11.5. Make sure to include labels!

14. Match the layers within the atmosphere with the correct definition of each.

Troposphere	Temperature increases due to concentration of ozone
Stratosphere	the coldest layer of the atmosphere, meteors burn up here
Mesosphere	low density of air molecules and very high temperatures
Thermosphere	warmest at the bottom, temperature at the top is about -60°C
Ionosphere	no specific outer limit
Exosphere	where ions exist and temperature is warmer

15. Draw the picture of the layers of the atmosphere showing activities that occur in each layer. Label each layer and mark relative altitudes.