Atmosphere Characteristics Practice

Name: _____

MULTIPLE CHOICE: Circle the letter of the choice that best completes the statement.

1. _____ Most of the Earth's atmosphere is composed of _____.
   a. Oxygen and hydrogen
   b. Hydrogen and nitrogen
   c. nitrogen and oxygen
   d. carbon and ozone

2. _____ Water vapor in the atmosphere is the source of _____.
   a. Clouds and rain
   b. Pollution
   c. carbon dioxide
   d. wind

3. _____ The amount of energy the atmosphere absorbs depends in part on its level of _____.
   a. Nitrogen
   b. Argon
   c. nitrogen dioxide
   d. carbon dioxide

4. _____ Solid particles in the atmosphere include salt and _____.
   a. Leaves
   b. Ozone
   c. dust
   d. lightning

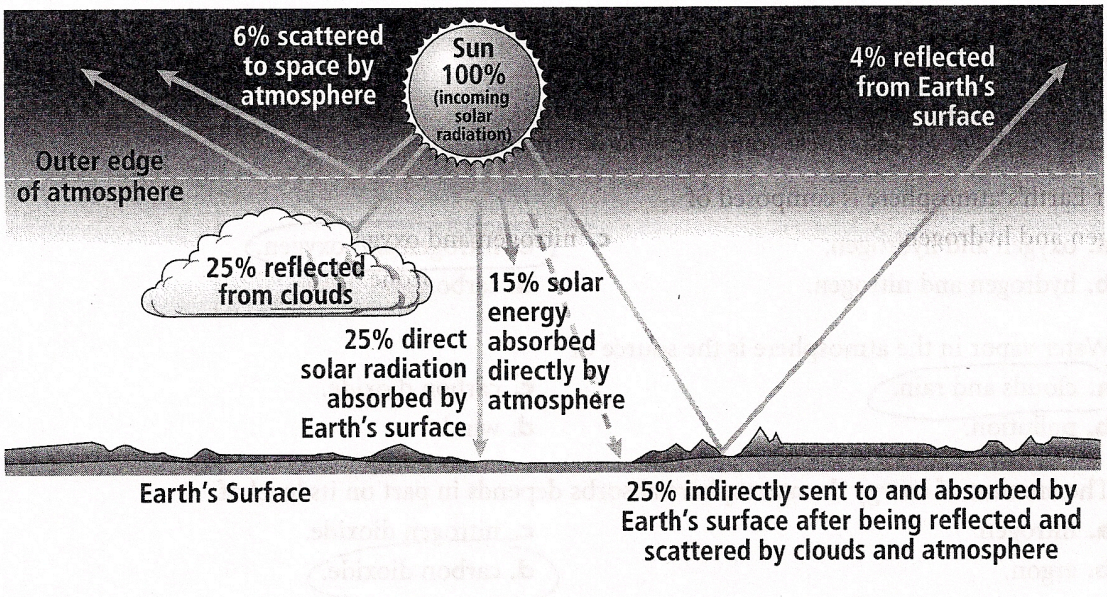
5. _____ Ozone in Earth's atmosphere is important because it _____.
   a. Causes rain to fall
   b. Absorbs harmful radiation
   c. absorbs harmful pollution
   d. helps clouds form

COMPLETION: Complete the table by writing the name of the atmospheric layer that matches each description.

CHARACTERISTIC	ATMOSPHERIC LAYER
6. Contains concentrated ozone	
7. Layer just above the stratosphere	
8. Most weather occurs here	
9. Outermost layer of the atmosphere	
10. Between mesosphere and exosphere	

COMPLETION:

Examine the diagram below. Then answer the questions.



11. What is the ***source*** of all energy that reaches the Earth? _____

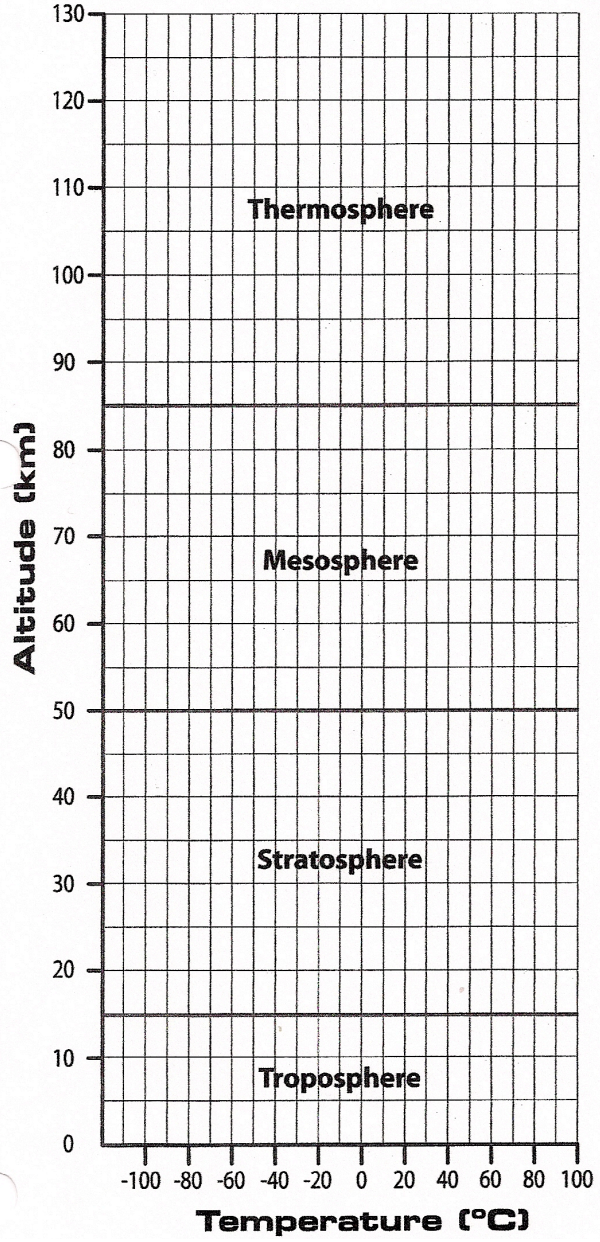
12. What ***percentage*** of the Sun's energy does Earth's surface absorb directly or indirectly? _____

13. What ***percentage*** of the Sun's energy is scattered or reflected back into space? _____
    a. What causes this loss of solar energy? _____

14. Earth's surface is heated by energy from the Sun. For the most part, the re-released energy from the surface heats up the atmosphere. ***Describe*** the method by which energy is transferred from Earth's surface to the air above it.

15. ***Describe*** the purpose of the ozone layer and how it affects Earth.

DIRECTIONS: Use the data table of altitudes and temperatures to create a line graph of the atmosphere's varying temperatures. Then, answer the questions below.



Altitude	Temperature
0 km	20°C
5 km	-20°C
10 km	-55°C
20 km	-55°C
50 km	0°C
55 km	0°C
85 km	-80°C
100 km	-75°C
110 km	0°C
120 km	80°C

1. How does the temperature change as altitude increases in the troposphere?

   _____

2. How does the temperature change as altitude increases in the thermosphere?

   _____

3. Why do you think the temperatures are so different in these two layers?

   _____

   _____

   _____

   _____

   _____

   _____

   _____