

Lesson Outline**LESSON 1*****Describing Earth's Atmosphere*****A. Importance of Earth's Atmosphere**

1. The _____ is a thin layer of gases surrounding Earth.
It is _____ of kilometers high.
2. Earth's atmosphere contains a layer of _____ that helps keep temperatures on Earth within a range that living organisms can survive.
3. Earth's atmosphere helps protect living organisms from some of the _____ harmful rays.
4. Friction within the atmosphere causes most _____ to burn up before striking Earth.

B. Origins of Earth's Atmosphere

1. Earth's ancient atmosphere formed from hot _____ that escaped from Earth's hardening surface.
2. Earth's ancient atmosphere consisted of water vapor with a little bit of _____.
3. _____ is water in its gaseous state.
4. As Earth's atmosphere cooled, the water vapor condensed into a(n) _____ that fell as rain. Over thousands of years, the rain formed Earth's _____.
5. _____ from the atmosphere dissolved in rainwater and fell into the oceans.
6. Organisms that use photosynthesis produced the _____ in today's atmosphere.

C. Composition of the Atmosphere

1. Nitrogen makes up about _____ percent of Earth's atmosphere.
2. Oxygen makes up about _____ percent of Earth's atmosphere.
3. The amounts of atmospheric _____, which include water vapor, carbon dioxide, and ozone, vary.
4. Volcanoes send _____ and liquid acids into the atmosphere.

D. Layers of the Atmosphere

1. The atmospheric layer closest to Earth is the _____.

Lesson Outline continued

2. The warmest part of the troposphere is near _____.
3. The _____ is the atmospheric layer directly above the troposphere.
4. The area of the stratosphere that has a great amount of ozone gas is the _____.
5. _____, which can kill plants and animals, are absorbed more effectively by ozone than by oxygen gas.
6. Combined, the _____ and the _____ are layers of the atmosphere that are much broader than the troposphere and the stratosphere. They have a low _____ of gases.
7. The _____ is a region within the mesosphere and troposphere that contains ions. Displays of colored lights called _____ occur here.
8. In the _____, gas molecules rarely strike one another.

E. Air Pressure and Altitude

1. _____ pulls gas particles in the atmosphere toward Earth's surface.
2. Air pressure is _____ near Earth's surface because all the molecules of the atmosphere push downward on the lowest layer of air.

F. Temperature and Altitude

1. In the troposphere, temperature _____ as altitude increases. The opposite occurs in the next layer up, the _____.
2. In the mesosphere, temperature _____ as altitude increases. In the thermosphere and exosphere, the _____ happens.