Test Your Knowledge!

The Dual Role of the Respiratory System
(pages 89 and 90)

1. Which gas, referred to as an oxidizing agent, makes the combustion of nutrients possible? Oxygen
2. Is there more carbon dioxide in the air we inhale or in the air we exhale? Where does it come from? exhale, cellular respiration
3. Compare inhaled air with exhaled air using a comparative table, like the one below. Enter the names of the gases.

Inhaled air		Exhaled air	
Proportion	Gas	Proportion	Gas
78%	Nitrogen	78%	Nitrogen
21%	Oxygen	16%	O_2
0.04%	CO_2	5%	CO_2

The Anatomy of the Respiratory System
(pages 90 to 93)

4. Place the following respiratory structures in the order in which air enters them:
   5 *a)* Bronchi
   4 *b)* Trachea
   2 *c)* Pharynx
   1 *d)* Nasal cavities
   7 *e)* Alveoli
   6 *f)* Bronchioles
   3 *g)* Larynx

5. Identify the respiratory structures described in the following sentences:
   a) Both air and food pass through this structure. Pharynx
   b) This membrane surrounds each lung. Pleura
   c) The vocal cords are located in this structure. voice box in larynx
   d) This structure is made up of a group of bronchioles and alveoli. lung
   e) This structure warms the air through its blood vessels. nasal cavity
   f) It is the smallest division of the bronchi. bronchioles
   g) This structure, aside from the bronchi, ha... cilia that filter the air. trachea/nasal cavity
   h) This respiratory muscle forms a partitio... between the lungs and the abdomen. diaphragm
   i) They are grouped together in clusters and are surrounded by blood vessels. alveoli

The Physiology of the Respiratory System
(pages 94 and 95)

6. Which muscles contract during inhalation? intercostal / diaphragm.
7. During inhalation, in which direction does the diaphragm move? down.
8. Oxygen and carbon dioxide diffuse. Explain the principle of diffusion. move from ↑ concentration to ↓ concentratio...
9. Are the following statements true or false?
   a) The volume of the rib cage increases during exhalation. T
   b) Air pressure in the lungs decreases during inhalation. T
10. Identify the gases involved in the gas exchanges that occur in the alveoli and blood vessels.
    a) Gas A: O_2
    b) Gas B: CO_2