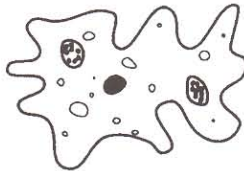
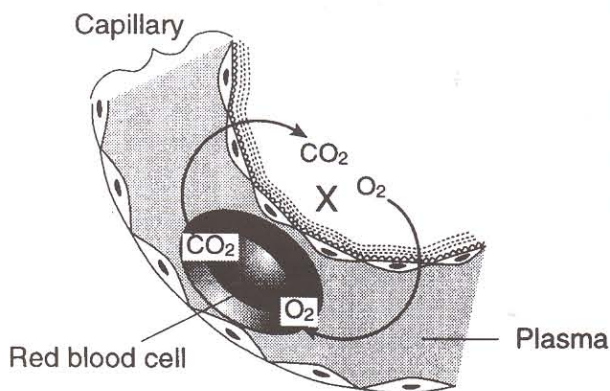


- All organisms that carry out aerobic cellular respiration have adaptations for the
  - production of chlorophyll
  - exchange of gases
  - release of oxygen
  - removal of lactic acid
- The diagram below represents a unicellular organism.



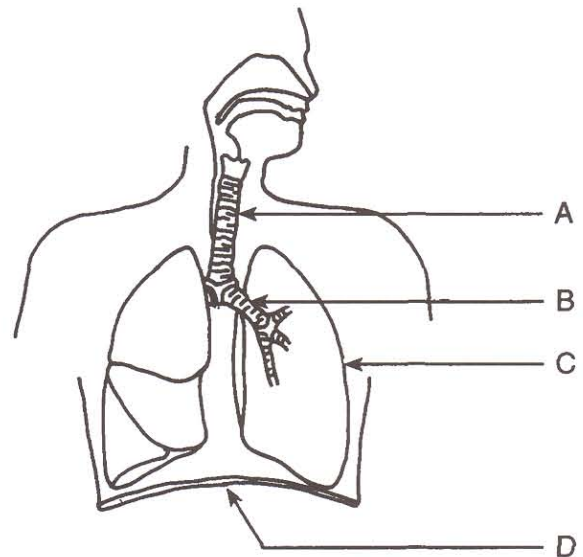
This organism is able to survive without a specialized respiratory system because

- it possesses chloroplasts that produce oxygen when exposed to sunlight
  - its respiratory surface is in direct contact with a watery environment
  - its vacuoles release oxygen from stored nutrients
  - it possesses a nucleus that controls the synthesis of respiratory enzymes
- The diagram below represents part of a capillary in a specific region of the human body.



- The region labeled X represents part of
- an alveolus
  - a glomerulus
  - the liver
  - avillus

- Which structure shown in the diagram below contracts, causing a pressure change in the chest cavity during breathing?



- A
- B
- C
- D

- Which statement best describes the human respiratory system?
  - It is composed of a network of moist passageways that permit air to flow from the external environment to the lungs.
  - Each cell of the human body is in direct contact with the external environment, and gas exchange occurs by diffusion.
  - The external body surface is kept moist to allow for gas exchange.
  - Gases diffuse across membranes on both the external and internal surfaces of the body.
- In humans, which structure prevents food from entering the trachea?
  - cartilage ring
  - mucous membrane
  - alveolus
  - epiglottis
- A humidifier is a device that adds moisture to dry air. Which part of the human respiratory system has the same function?
  - epiglottis
  - nasal cavity
  - cartilage rings
  - diaphragm

8. Which part of the human respiratory system is a thin, moist membranous structure where gas exchange occurs?
- (1) alveolus                      (3) bronchus  
(2) epiglottis                      (4) trachea
9. In vertebrates, organs adapted for respiratory gas exchange are characterized by the
- (1) presence of villi  
(2) lack of blood vessels  
(3) lack of cell membranes  
(4) presence of many capillaries
10. Humans breathe more rapidly during exercise than before it because during exercise the blood contains
- (1) an increased level of carbon dioxide  
(2) a decreased amount of hemoglobin  
(3) an increased level of oxygen  
(4) a decreased number of red blood cells