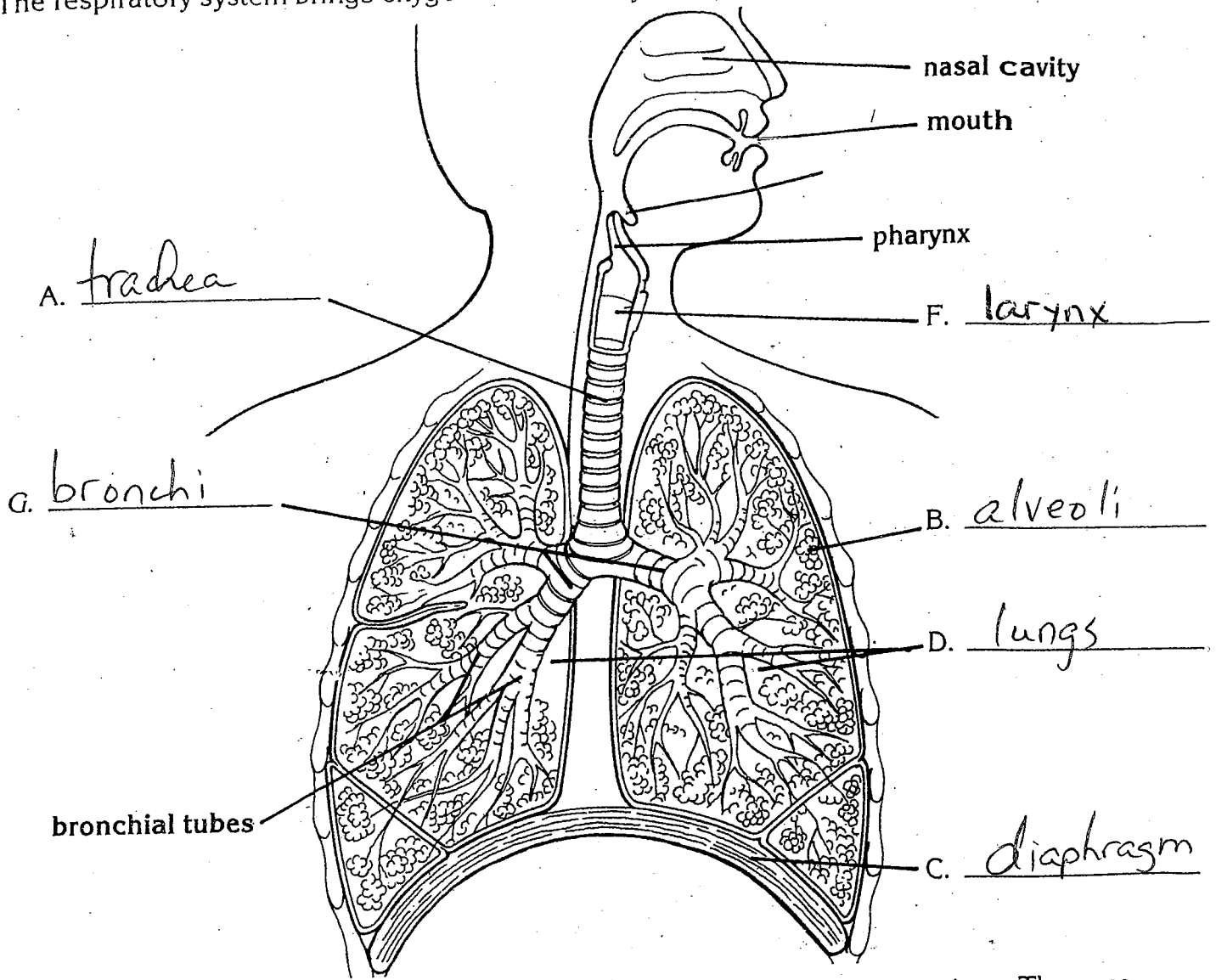


The respiratory system brings oxygen into the body and removes carbon dioxide and other gases



1. Study the diagram to correctly identify these parts of the respiratory system. Then use each answer to correctly label the diagram.

- A. the tube that connects the throat and the bronchial tubes trachea
- B. the grape-like clusters of air sacs within the lungs alveoli
- C. the large band of muscle that controls the size of the chest cavity diaphragm
- D. the two large lightweight respiratory organs of the body lungs
- F. the part of the respiratory system that helps us speak larynx
- G. the two branches of the windpipe bronchi

A. Read pages 65 to 67 as you fill in the blanks.

The respiratory system is responsible for absorbing oxygen from the air and removing carbon dioxide from the blood.

The diaphragm is a large thin sheet of muscle that spreads across the chest cavity, below the lungs. The diaphragm is largely responsible for breathing. When the diaphragm contracts, the chest cavity becomes larger, and air is forced into the lungs. When the diaphragm relaxes, the chest cavity becomes smaller, and air is forced out of the lungs.

The trachea is a hard, ridged tube that leads to your lungs. The ridges are rings of cartilage that support the trachea and keep it open at all times. The trachea branches into two tubes, called the bronchi.

The lungs have many tiny air sacs where gases are exchanged between the air and the blood. (These tiny sacs are called alveoli.) These air sacs increase the amount of surface area that is available for the exchange of gases. When you breathe in, air that contains oxygen is brought into the air sacs. The oxygen ~~the~~ diffuses out of the air sacs into tiny blood vessels. Then the blood carries the oxygen throughout the body and the oxygen then diffuses into your body's cells. Carbon dioxide, a waste material produced in the cells, diffuses into the bloodstream and is brought back to the lungs. The carbon dioxide diffuses into the air sacs and is pushed out of the body when you exhale.

B. Short Answer.

1. Explain why it is better to have many tiny air sacs rather than just 2 big air sacs. (2)

- get more surface area

- so more oxygen can pass through into blood

2. If you smoke, the tar (brown stuff) condenses and coats your alveoli. Explain how would this affect the exchange of gases. (2)

- tar coats alveoli & blocks oxygen from passing in to blood &

- blocks carbon dioxide passing out of blood into alveoli

3. Why is it better for your trachea to be hard and ridged like a vacuum hose and not floppy? (2)

- keeps it open, so you can always get air to lungs

4. Why does oxygen diffuse from your air sacs into the blood vessels around them? (1) (Hint: molecules move from an area of)

more to less!