

The Respiratory System

Chapter 14: The Respiratory System · Topic 1

Key Concept

Air travels from the nose or mouth through the trachea, into the bronchi, and finally into tiny air sacs called alveoli in the lungs.

At the alveoli, oxygen diffuses into the blood while carbon dioxide diffuses out, facilitated by the alveoli's thin walls and large surface area.

The diaphragm, a dome-shaped muscle, contracts and relaxes to change chest cavity volume, drawing air in and pushing air out.

Understanding the respiratory system helps us appreciate how our body obtains the oxygen needed for cellular respiration and energy production.

Quick Revision Notes

- Air travels through nose/mouth, trachea, bronchi, alveoli.
- Alveoli are tiny air sacs in the lungs.
- Oxygen diffuses into blood at alveoli.
- Carbon dioxide diffuses out at alveoli.
- Thin walls and large surface area aid diffusion.
- The diaphragm contracts and relaxes.
- This changes chest cavity volume.
- This draws air in and pushes it out.

Practice Questions

- 1 Draw and label the respiratory system.
- 2 Discuss what happens at the alveoli.
- 3 Explain the diaphragm's role in breathing.
- 4 Research why alveoli have a large surface area.
- 5 Discuss the path air takes when we inhale.
- 6 Explain gas exchange in your own words.