

KEY FACTS

- Diffusion: NET movement of particles from HIGH to LOW concentration — passive, no energy
- Rate increases with: steeper gradient, higher temperature, larger surface area, thinner membrane
- Examples: O₂ from alveoli to blood; CO₂ from blood to alveoli; glucose from gut to blood
- Alveoli adaptations: large SA, thin walls, moist lining, good blood supply
- ★ Fick's Law: $\text{rate} \propto (\text{SA} \times \text{concentration difference}) \div \text{membrane thickness}$

KEY TERMS

Diffusion	Net movement from HIGH to LOW concentration — passive, no energy
Concentration gradient	Difference in concentration between two areas
Net movement	Overall direction of movement despite random motion in all directions

■ EXAM TIP: "NET movement" must be in the definition to gain the mark. Diffusion is PASSIVE — NO energy needed.