

TRACHEA

AKA Wind Pipe. Air travels through the trachea to reach the lungs.

BRONCHI

The air travels through larger branches called Bronchi

BRONCHIOLES

The air then reaches smaller branches called Bronchioles

ALVEOLI

At the end of the bronchioles lies millions of tiny air sacs called alveoli. This is where gas exchange takes place.

DIAPHRAGM

Responsible for inspiration
Moves to a flat position when inhaling to push the lungs up, enabling air to rush in
When exhaling moves to a dome position, allowing the lungs to lower and air to rush out

PE COMPONENT 1 - RESPIRATORY SYSTEM

Low concentration CO₂ in alveoli

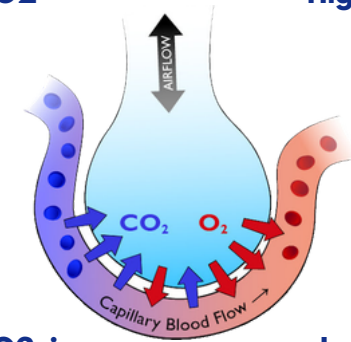
along pressure gradient

High Concentration CO₂ in blood vessel

High concentration O₂ in alveoli

along pressure gradient

Low Concentration O₂ in blood vessel

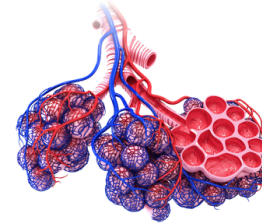
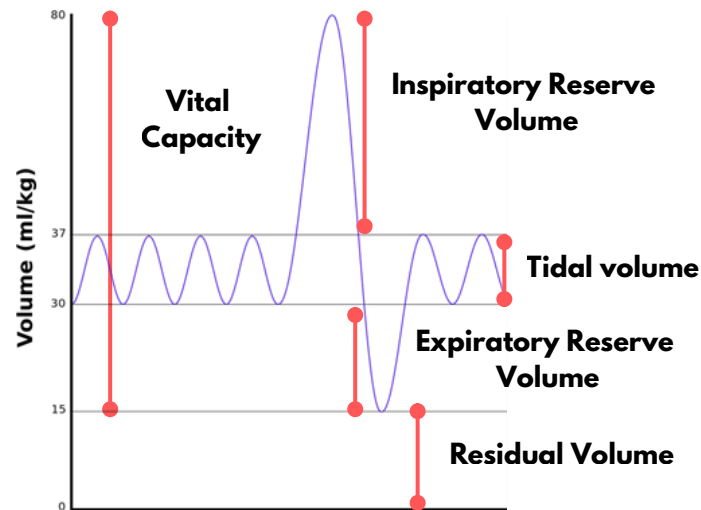


Gas Exchange at the Alveoli

- The **oxygen** in the alveoli diffuses into the **bloodstream** and is transported to the **working muscles**
- The **CO₂** from the **bloodstream** diffuses into the alveoli in order to be exhaled by the **lungs**



Labelling a Spirometer Trace



Alveoli

→ Tiny **sacs** of air that have a high concentration of oxygen after breathing in

→ Oxygen diffuses through the moist, **thin walls** & into the blood stream. This happens as gases move from areas of **high concentration**, into areas of low concentration



→ Alveoli have a **large surface area** and are surrounded by **capillaries**, helping gas exchange

