PE COMPONENT 1 - RESPIRATORY SYSTEM

TRACHEA

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

BRONCHI

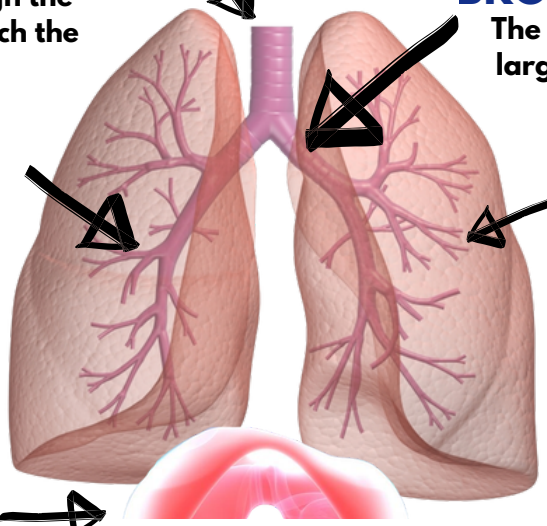
The air travels through larger branches called Bronchi

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

Lung Volumes

- **Breathing Rate:** The number of breaths taken in a minute.
- **Minute ventilation:** The volume of gas inhaled or exhaled from the lungs per minute.
- **Tidal volume:** The amount of air which enters the lungs during normal inhalation at rest or during exercise.

	Inhaled Air	Exhaled Air
Oxygen	21%	16%
Carbon Dioxide	0.04%	4%

Lactic Acid

- Lactic acid builds up following anaerobic exercise due to a lack of oxygen being present in the muscles. This is known as oxygen debt.
- This is toxic and causes your muscles to ache and cramp (and eventually stop working).

Aerobic Respiration

Glucose + Oxygen = Energy + CO2 + Water

Anaerobic Respiration

Glucose = Energy + Lactic Acid