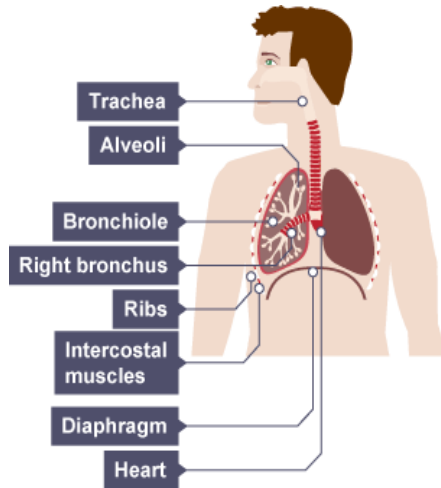


Y8 - Knowledge organiser – 8.1 – Breathing & Digestion

The respiratory system 1

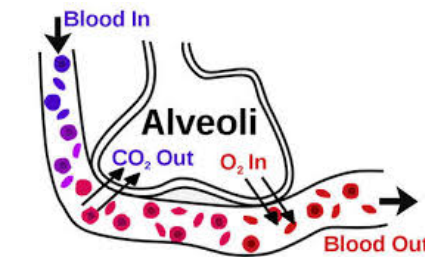
- Made from the following parts:



Breathing 2

- Breathing:** movement of air in/out of the lungs.
- Happens because of muscles in the ribcage & diaphragm.
- Rate of breathing is determined by the amount of oxygen needed by the cells.
- Lung volume:** the amount of air breathed in or out.

Gas exchange 3



- Oxygen goes to cells for **respiration**.
- Carbon dioxide is removed from the body.
- Alveoli are adapted by having thin walls, a good blood supply and are moist.

Exercise, smoking & asthma 4

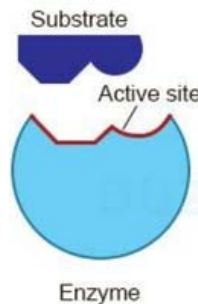
- Diseases like **asthma** can damage the lungs.
- Lifestyle choices like smoking can also do this.
- They can reduce the lung volume and make it harder to breathe.

Balanced diets 5

- Fibre:** parts of plants, not digested. Helps to eliminate waste.
- Carbohydrates:** source of energy.
- Lipids:** another source of energy.
- Protein:** nutrient for growth/repair of body.
- Iron:** needed for red blood cells.
- Calcium:** needed for strong teeth/ bones.

Breaking down food 6

- Food must be broken down in order to diffuse into the blood
- Enzymes:** substances that speed up the chemical reactions of digestion.



Digestive system 7

- Stomach:** food is mixed with acidic juices to start digestion/ kill microorganisms.
- Small intestine:** digestion is completed here, nutrients absorbed by the blood.
- Large intestine:** water is absorbed here.

Digestive system 8

