

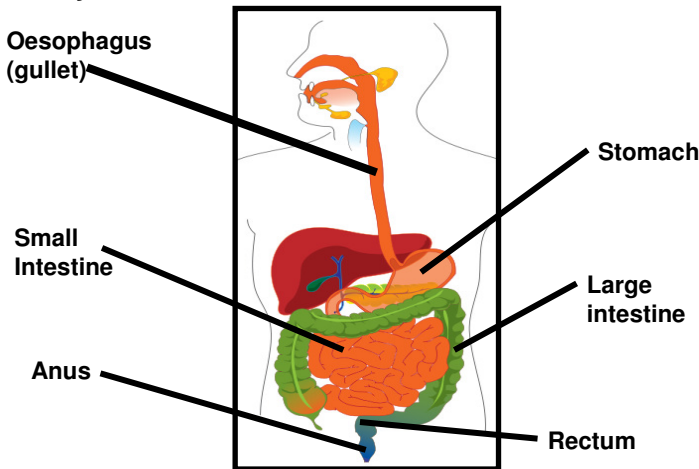
Summary – “Body Systems”

Systems and organs

The body has many **organs**. Organs work together as a **system** to perform a **function**.

System	Function
Digestive System	To break down food.
Respiratory system	To produce energy.
Circulatory system	To transport substances around the body.
Skeleton	Protection, movement and support.
Endocrine system	To control the functions of the body
Reproductive system	To produce offspring.
Urinary system	To expel liquid waste

The digestive system



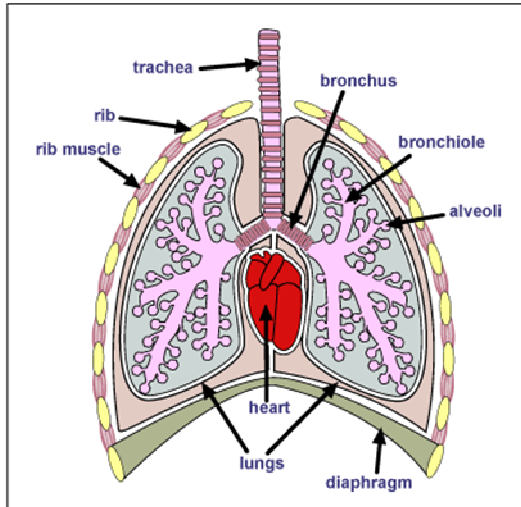
The **mouth** breaks down food. The **oesophagus** transports food to the stomach. The **stomach** releases enzymes to break down the food more. The **useful parts** of the food are **absorbed** by the **small and large intestine**. The **waste** is stored in the **rectum** and **excreted** through the **anus**.

For a **healthy diet**, our bodies need **carbohydrates** (bread, pasta etc.), **proteins** (meat, fish etc.), vitamins (fruit, vegetables) and a small amount of **fat** (fats, oils). The **most important carbohydrates** are **starch and glucose**. A starch molecule is many glucose molecules joined together. **Starch** turns **iodine solution** from **orange** to **blue/black**. **Glucose** turns **Benedict's solution** from **clear blue** to a **cloudy orange** when **heated**.

The Respiratory System

Respiration is the process where the body reacts **food with oxygen** and **produces energy**. The **waste products** of this process are **carbon dioxide and water**.

Food + Oxygen → Carbon Dioxide + Water



The nose is **connected to the lungs** by the **trachea**. Air travels through the **bronchus** and **bronchioles**. The **oxygen** in the air is **reacted with food** in the **alveoli**.

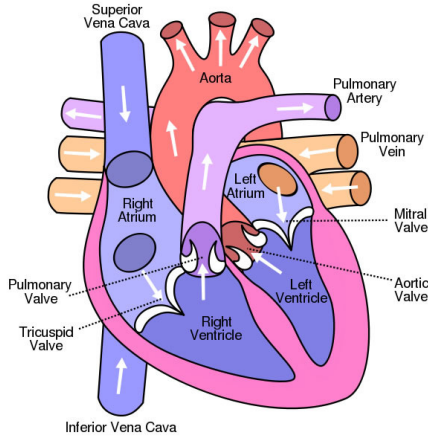
We **breath out** because the **diaphragm** moves up **squashes the lungs** and forces air out. We **breath in** when the **diaphragm** moves **down**. When we **exercise** we need more energy so our **breathing quickens**.

The Circulatory System

Blood carries oxygen around the body. It is **pumped by the heart**. The heart is split into two halves. The **right side** (as the person is facing you) pumps blood to the **lungs**. The **left side** pumps blood to the **rest of the body**. The left side is bigger than the right side as it has to work harder.

There are three types of blood vessels:

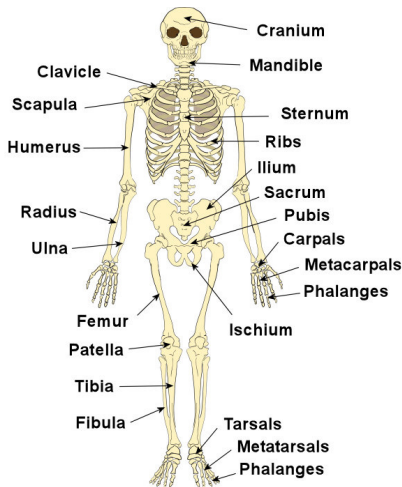
Vessel	Function	Blood colour
Arteries	Carries blood away from the heart.	Bright red (has oxygen)
Veins	Carries blood towards the heart.	Purple (no oxygen)
Capillaries	Carries blood to muscles and organs.	Bright red (has oxygen)



Blood has **red blood cells** to carry oxygen, **white blood cells** to fight infection, **platelets** to heal wounds and **plasma** that allows the blood to flow.

The Skeleton

The skeleton is for **protection**, **support** and **movement**. Red blood cells are produced by the marrow in our bones.



The Endocrine System,

Chemicals called **hormones** tell our bodies **what to do**. Our hormones tell us what to do when it is **too cold**, **too hot** or even **when to grow!**

When things go wrong

When our bodies are not working properly, medical professionals such as doctors can help us find out what the problem is. Doctors use different tools for different reasons.

Tool	Use
Thermometer	Measure temperature.
Stethoscope	Listen to the heart.
X-ray	Examine bones.
Endoscope	Examine the digestive system.
Ultrasound	Look at soft organs or a developing baby.
CT Scan	Look at soft organs.
Sphygmomanometer	Measure blood pressure.