

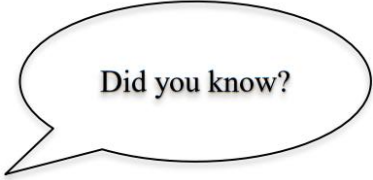
Lesson 1: Staying Alive



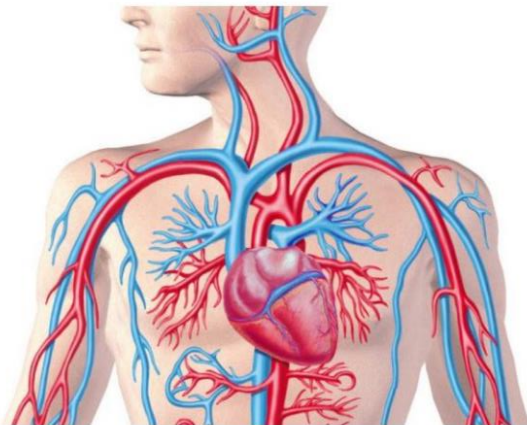
- I can identify and name the main parts of the human circulatory system.



- The heart beats around 3 billion times in the average person's lifetime.
- If you put your circulatory system on a straight line, it is long enough to orbit the Earth two and a half times!
- The human stomach can stretch large enough to hold almost 1 gallon (4.5 litres) of water. Where does it all go?



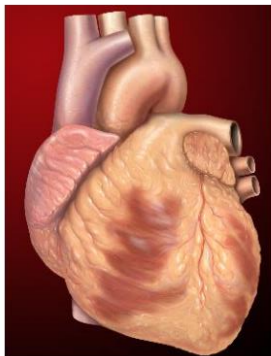
What is the human circulatory system?



The **circulatory system** is made up of the heart, the lungs, blood and the vessels it travels through.

Its **function** is to transport nutrients, gases and waste between the cells of the body and the digestive system, respiratory system and excretory system.

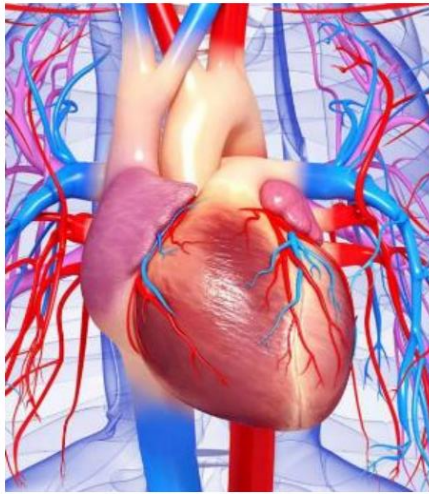
It also carries **hormones** and white blood cells for fighting disease, as well as assisting in maintaining body temperature.



The **heart** is a huge muscle that never appears to rest. In fact it does rest – between each heart beat!

It beats rhythmically, contracting two sets of chambers to act as a double pump to move blood around the body.

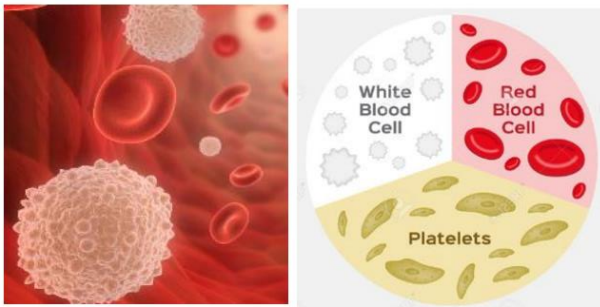
It is about the size of a closed fist, and is protected by the ribs.



Arteries carry blood **from** the heart and **veins** carry blood **to** the heart.

The **right side** of the heart pumps deoxygenated (“used”) blood through the pulmonary circuit to the lungs, where it picks up oxygen and where carbon dioxide is released.

The blood is then returned to the **left side** of the heart, which is sufficiently muscular and powerful to pump the blood through the systemic circuit to all tissues of the body, including the kidneys for waste removal, and the liver for blood sugar regulation.



Blood is made of a watery yellow fluid called plasma that carries dissolved nutrients, hormones and proteins.

It contains **red blood cells**, which carry gases around the body and make the blood appear red. It also carries **white blood cells**, which fight against disease. The blood also contains **platelets**, which form the scabs we get on a cut as part of the healing process.



Can you match each word to its correct definition?

Heart
Lungs
Blood
Oxygen
Vein
Artery

The gas in the air that is needed for respiration.
The organ that gathers in air as part of breathing.
A blood vessel carrying blood away from the heart.
The organ that pumps blood around the body.
The liquid that transport oxygen around the body.
A blood vessel carrying blood back to the heart.



Watch the video about the circulatory system and complete this diagram with your partner. Use all the words below and add any interesting details too!

https://www.youtube.com/watch?v=f9ONXd_-anM



Lungs

Heart

Veins

Arteries

Kidneys

Windpipe

