



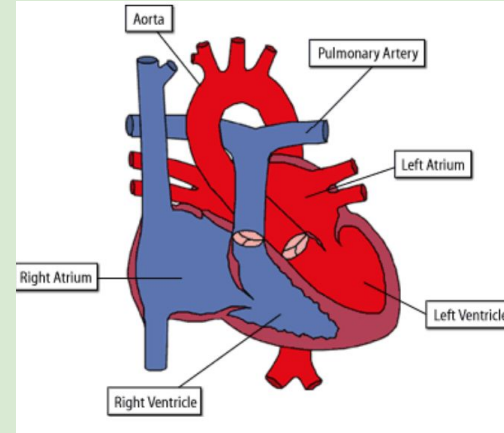
# Year 6 Science - Why is the circulatory system so important?

## Key Vocabulary

<b>Circulatory system</b>	A system which includes the heart, veins, arteries and blood transporting substances around the body.
<b>Heart</b>	An organ which constantly pumps blood around the circulatory system.
<b>Blood vessel</b>	The tube-like structures that carry blood through the tissues and organs. Veins, arteries and capillaries are the three types of blood vessels.
<b>Oxygenated blood</b>	Oxygenated blood has more oxygen. It is pumped from the heart to the rest of the body.
<b>Deoxygenated blood</b>	Deoxygenated blood is blood where most of the oxygen has already been transferred to the rest of the body.
<b>Aorta</b>	The largest artery supplying oxygenated blood to the rest of the body
<b>Arteries</b>	Carry blood with oxygen from heart
<b>Capillaries</b>	Tiny vessels where oxygen gets transferred to cells
<b>Pulse rate</b>	The number of heart beats per minute

A healthy diet involves eating the right types of **nutrients** in the right amounts.

Drugs, alcohol and smoking have negative effects on the body.

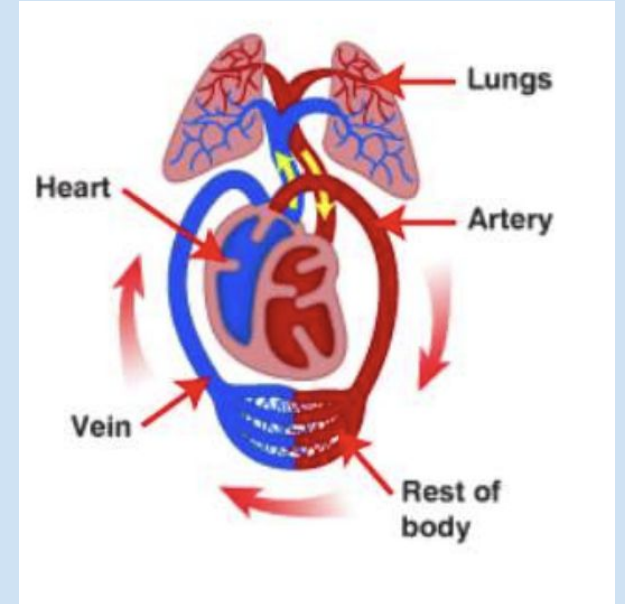


The heart pumps blood to the lungs to get oxygen. It then pumps this **oxygenated blood** around the body.

The heart is composed of four **chambers**; the right atrium, the right ventricle, the left atrium and the left ventricle. How often your heart pumps is called your **pulse**.

## Why is exercise so important?

- Tones our muscles and reduce fat
- Increases fitness
- Strengthens the heart
- Improves lung function
- Improves skin



Blood pumps in a figure of eight around the body - **deoxygenated blood** leaves the heart then travels to the lungs to take in oxygen: this makes the blood **oxygenated** to travel around the body.

## Components of blood

### Plasma

Transports nutrients, hormones, and proteins. It is a yellow liquid that makes up about 55% of the body's blood volume.

### Red blood cells

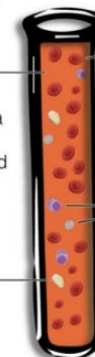
Carry fresh oxygen through the body and remove carbon dioxide. Red blood cells make up about 40 to 45% of blood.

### White blood cells

Part of the body's immune system, detect and fight viruses and bacteria. There are five major types of white blood cells, and they make up less than 1% of blood.

### Platelets

Form clots to stop bleeding. Platelets make up less than 1% of blood.



Source: American Society of Hematology