

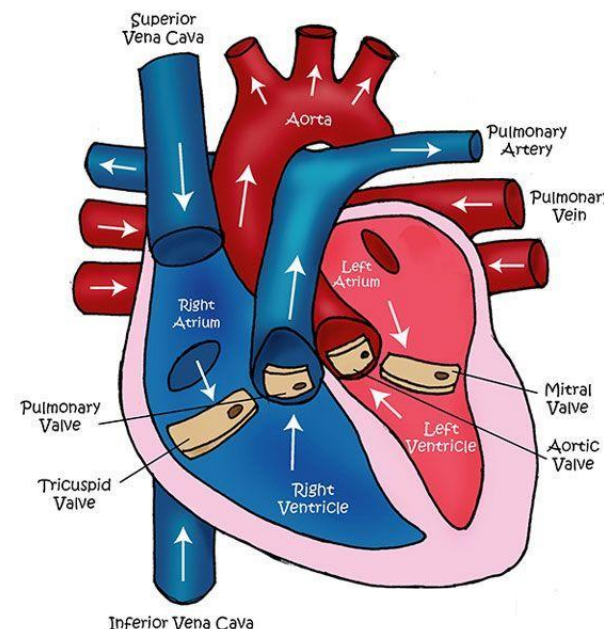


Key Vocabulary

Word	Meaning
The Circulatory System	A system which includes the heart, veins, arteries and blood, and transports substances around the body.
Oxygenated Blood	Blood carrying oxygen. It is pumped from the heart to the rest of the body.
Deoxygenated Blood	Blood where most of the oxygen has already been transferred to the rest of the body.
Blood Vessel	A tube through which the blood circulates in the body. Blood vessels include a network of arteries, veins and capillaries.
Artery	A blood vessel that carries mostly oxygenated blood away from the heart to all parts of the body. The aorta is the main artery of the body.
Vein	A blood vessel that carries mostly deoxygenated blood from various parts of the body towards the heart. Examples include the superior and inferior vena cava.
Capillary	A tiny blood vessel that connects the smallest arteries (arterioles) to the smallest veins (venules).
Circulation	the continuous movement of a fluid around or inside a system or area. Blood continuously flows around the body, delivering oxygen and nutrients to every cell.

The Heart

- **Deoxygenated blood** travels through the superior and inferior vena cava into the right atrium.
- The blood is pumped by the heart into the right ventricle and out through the **pulmonary artery** into the lungs.
- The blood becomes **oxygenated** before re-entering the heart through the **pulmonary veins**.
- It travels through the left atrium and left ventricle, before being pumped to the rest of the body through the **aorta**.
- The process then repeats.



The heart is a powerful organ that is situated between your lungs and protected by the ribcage. It is split between the left and right side. It's main job is to pump blood around the body.

Why does the body need oxygen?

Everyday functions of the body like digesting your food, moving your muscles or even just thinking, need oxygen. When these processes happen, a gas called carbon dioxide is produced as a waste product. The job of your lungs is to provide your body with oxygen and to get rid of the waste gas, carbon dioxide.



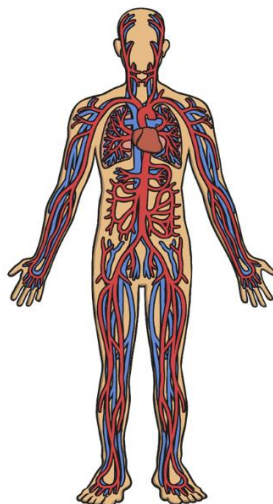
The Circulatory System

The **circulatory system** is a system of the body that includes the heart, **blood vessels** and blood. Its purpose is to transport oxygen and nutrients around the body.

Systemic circulation involves the transportation of blood around the entire body.

Pulmonary circulation involves the transportation of blood to the lungs to receive oxygen.

In diagrams of the circulatory system, **deoxygenated** blood is shown as blue, and **oxygenated** blood as red.



Healthy Humans

Diet

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

Humans should ensure that they are consuming foods from the four key groups: carbohydrates, fats, proteins and fibre, alongside a range of vitamins and minerals.



Drugs and Alcohol

A drug is any substance that has an effect on your body when it enters your system. Legal drugs include medicines like cough syrup and drinks like tea and coffee.

Prescribed drugs are legal drugs which require a prescription from a doctor. Some drugs are illegal to buy, take and sell as they can be addictive and extremely harmful.

Exercise

Exercise is physical activity that requires effort, raises your heart rate and works your muscles.

Humans should take part in exercise regularly. It has multiple benefits including -

- Stimulating and increasing brain chemicals
- Improves circulation
- Strengthens muscles.



What makes up blood?

Red Blood Cells	Carry oxygen and help remove carbon dioxide from the body.
White Blood Cells	Produce anti-bodies to fight infections.
Platelets	Enable your blood to clot (stop bleeding).
Plasma	Yellowish liquid that 'carries' the other elements.

Extending Your Learning

1. Create a daily or weekly meal plan for your family, thinking about the balance of nutrients and vitamins that humans need.
2. Visit the Science Museum website and explore the human body.
3. Visit the British Heart Foundation website to find out more about how the heart and circulatory system functions.



Knowledge Organiser Revision Schedule

Here is the revision schedule for this half term's knowledge organiser. Please help your child to learn the specified section each week. Retrieval activities will take place relating to these topics in the following week.

Week	Knowledge Organiser Section to Learn
Week 1 – w/c 31st October	The Circulatory System
Week 2 – w/c 7 th November	What makes up blood?
Week 3 – w/c 14 th November	The Heart
Week 4 – w/c 21 st November	Diet
Week 5 – w/c 28 th November	Exercise
Week 6 – w/c 5 th December	Whole Knowledge Organiser