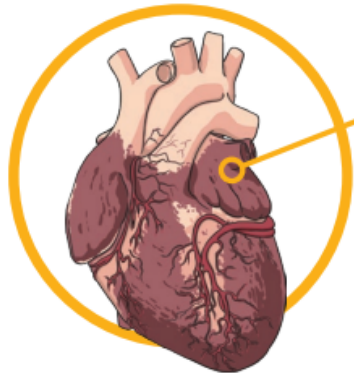


Year 6 science knowledge organiser

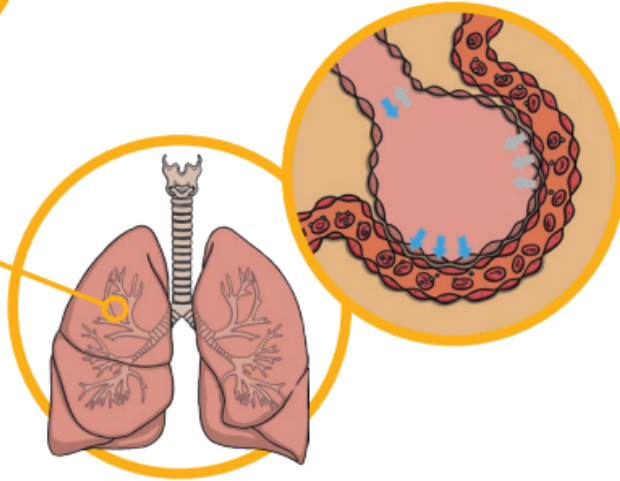
Animals including humans

Key Knowledge

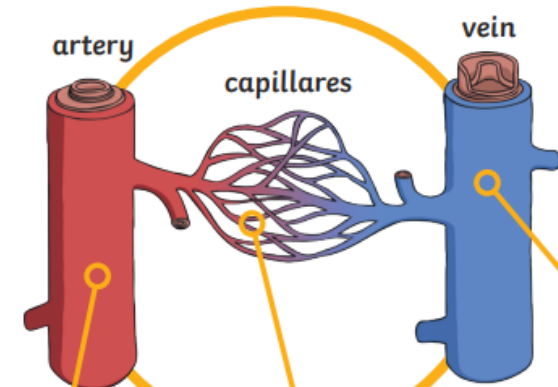


The **heart** pumps blood to the lungs to get oxygen.
It then pumps this oxygenated blood around the body.

Gas exchange takes place in the **alveoli** in the lungs.



Blood Vessels



Arteries carry oxygenated blood away from the **heart**.

Veins carry de-oxygenated blood toward the **heart**.

Capillaries are the smallest blood vessels in the body and it is here that the exchange of water, nutrients, oxygen and carbon dioxide takes place.

Key Vocabulary

| | |
|---------------------------|--|
| circulatory system | A system which includes the heart , veins, arteries and blood transporting substances around the body. |
| heart | An organ which constantly pumps blood around the circulatory system . |
| pulmonary | Relating to the lungs. |
| alveoli | Tiny air sacs in the lungs where gas exchange takes place. |
| gas exchange | The process by which oxygen enters the bloodstream from the lungs and the lungs receive carbon dioxide from the blood to breathe out. This process happens in the alveoli and the capillaries around the alveoli . |

Year 6 science knowledge organiser

Animals including humans

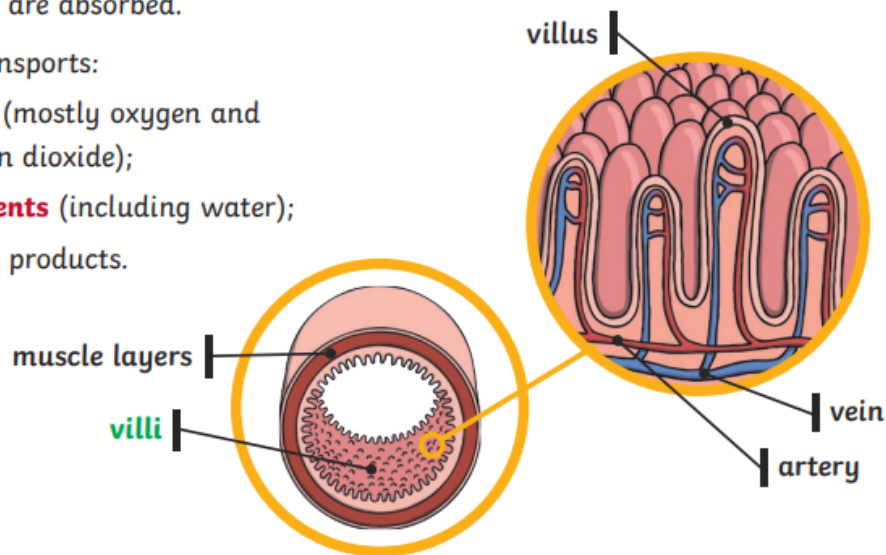
Key Knowledge

Inside the Small Intestine

The **nutrients** pass through the **villi** and are absorbed into the blood vessels. Water is absorbed in the small intestine in exactly the same way as other **nutrients** are absorbed.

Blood transports:

- gases (mostly oxygen and carbon dioxide);
- **nutrients** (including water);
- waste products.



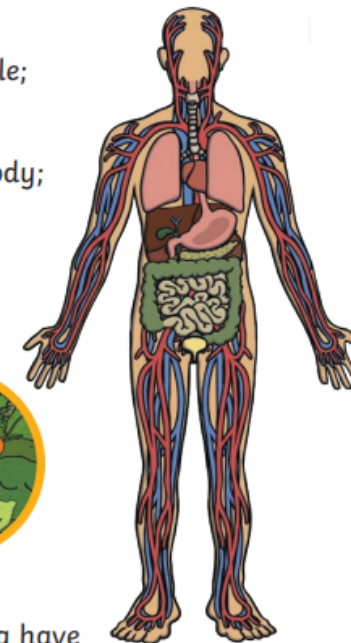
Regular exercise:

- strengthens muscles including the heart muscle;
- improves circulation;
- increases the amount of oxygen around the body;
- releases brain chemicals which help you feel calm and relaxed;
- helps you sleep more easily;
- strengthens bones.

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



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



Key Vocabulary

| | |
|------------------|---|
| villi | Structures in the small intestine which help absorb nutrients. |
| nutrients | Substances that animals need to stay alive and healthy. |
| kidneys | Organs which filter blood and make urine from waste and excess water. |
| liver | An organ which processes waste from the blood and produces bile. |
| drug | A substance containing natural or man-made chemicals that has an effect on your body when it enters your system. |
| alcohol | A drug produced from grains, fruits or vegetables when they are put through a process called fermentation. |