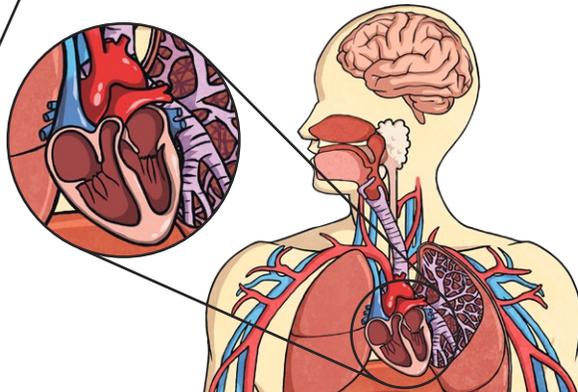


## Key Vocabulary

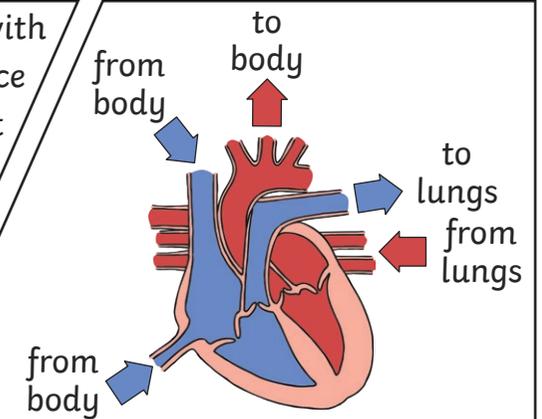
<b>circulatory system</b>	A system which includes the heart, veins, arteries and blood transporting substances around the body.
<b>heart</b>	An organ which constantly pumps blood around the <b>circulatory system</b> .
<b>blood vessels</b>	The tube-like structures that carry blood through the tissues and organs. Veins, arteries and capillaries are the three types of blood vessels.
<b>oxygenated blood</b>	<b>Oxygenated blood</b> has more oxygen. It is pumped from the <b>heart</b> to the rest of the body.
<b>deoxygenated blood</b>	<b>Deoxygenated blood</b> is blood where most of the oxygen has already been transferred to the rest of the body.

The **heart** pumps blood to the lungs to get oxygen.

It then pumps this **oxygenated blood** around the body.



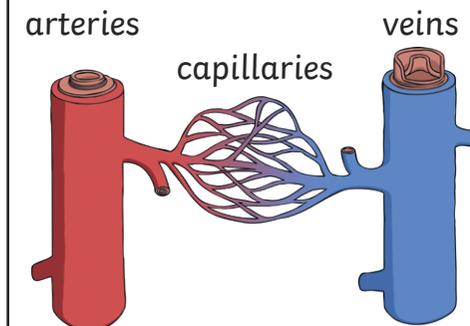
Mammals have **hearts** with four chambers. Notice how the blood that has come from the body is **deoxygenated**, and the blood that has come from the lungs is **oxygenated** again. The blood isn't actually red and blue: we just show it like that on a diagram.



**deoxygenated blood** → ← **oxygenated blood**

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.

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

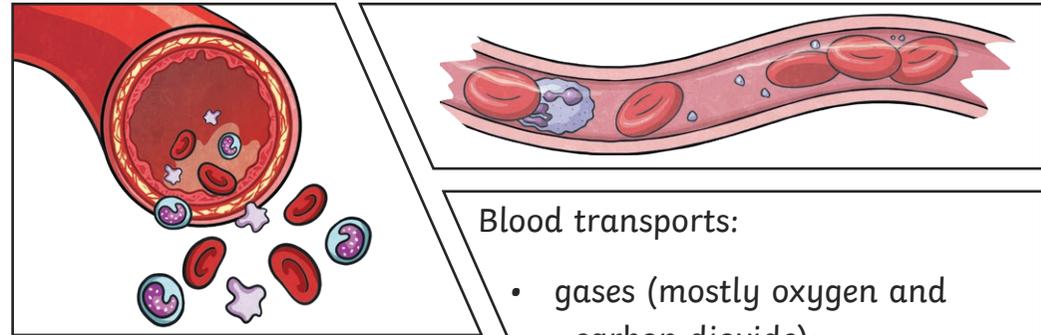


Veins carry **deoxygenated blood** toward the **heart**.

If you linked up all of the body's blood vessels, including arteries, capillaries, and veins, they would measure over 60,000 miles.

**Key Vocabulary**

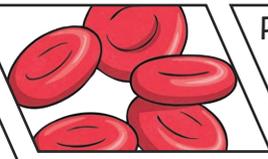
<b>drug</b>	A substance containing natural or man-made chemicals that has an effect on your body when it enters your system.
<b>alcohol</b>	A <b>drug</b> produced from grains, fruits or vegetables when they are put through a process called fermentation.
<b>nutrients</b>	Substances that animals need to stay alive and healthy.



The liquid part of blood contains water and protein. This is called plasma.

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

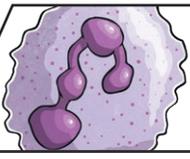
Plasma is liquid. The other parts of your blood are solid.



Red blood cells carry oxygen through your body.



Platelets help you stop bleeding when you get hurt.



White blood cells fight infection when you're sick.

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



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



- 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.
- It can even help to stop us from getting ill.



Key Vocabulary	
<b>civilisation</b>	A human society with well-developed rules and government, often where technology and the arts are considered important.
<b>drought</b>	A long period of time with little or no rain.
<b>jaguar</b>	A big cat, heavier than a leopard, with yellowish fur and black spots.
<b>scribes</b>	People trained to write things down, either as an official record or for someone else unable to write.
<b>codices</b>	Ancient handwritten texts. Maya <b>codices</b> could be unfolded like a concertina. One text is called a codex.
<b>maize</b>	Another word for sweetcorn or corn on the cob. It can be made into a dough and baked into tortillas.
<b>cacao beans</b>	<b>Cacao</b> trees sprout pods directly from their trunks. When they are ripe, the pods can be broken open to reveal the beans, which can then be dried, roasted and ground.

### Maya Numbers

The Maya developed an advanced number system for their time. They were one of only two cultures in the world to develop the concept of zero as a placeholder. The number system used three symbols in different combinations.

 = 0  
 = 1  
 = 5



The Maya built cities, pyramids and ornate sculptures in the rainforest.

### Food

The Maya people mainly ate **maize** (corn). **Maize** was very important to them as they believed that the first humans were made from **maize** dough by the gods. The Maya made a bitter chocolatey drink from **cacao beans** that was enjoyed by the rich. It was used for medicines and in ceremonies. The **cacao beans** were highly valued and even used as a form of money.

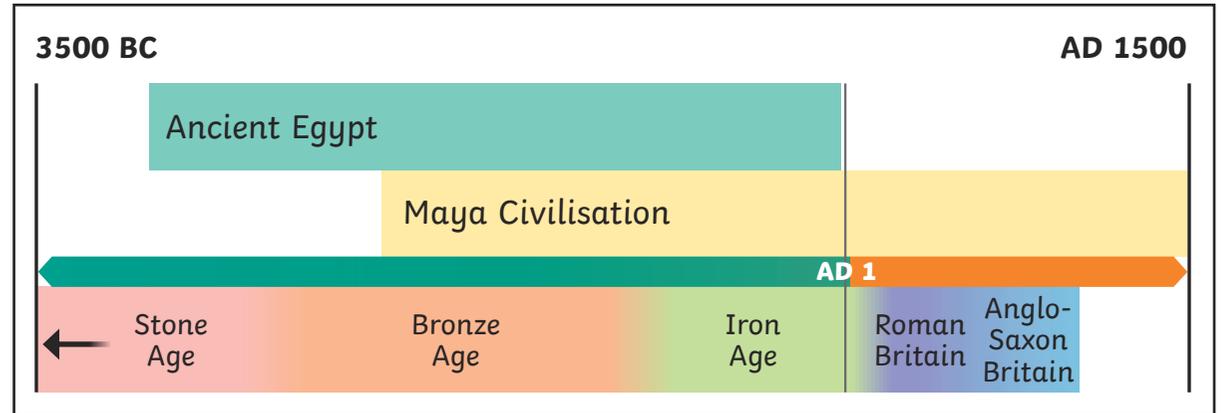


### Writing

The Maya writing system was used to write several different Maya languages. It was made up of many symbols called glyphs. Logograms are glyphs representing whole words. Syllabograms are glyphs representing units of sound (syllables). The glyphs were carved on stone buildings and monuments and painted on pottery. Maya **scribes** also wrote books called **codices**.



Key Dates (c. stands for circa, which means approximately)	
c. 2000 BC	The Maya <b>civilisation</b> comes into being in Central America.
c. 300 BC	Cities, such as El Mirador, become large and powerful.
AD 900	Cities in the rainforest are abandoned due to a <b>drought</b> . People move north to the highlands of Guatemala and the Yucatán.
AD 1000	Cities like Chichén Itzá (which has two temple pyramids) are still thriving.
AD 1500s (16 <sup>th</sup> century)	The Spanish arrive in South America and set out to destroy the remaining elements of Maya <b>civilisation</b> as part of their conquest.
AD 1839	American explorer and writer, John Lloyd Stephens, and British artist, Frederick Catherwood, explore Copán and other cities including Chichén Itzá, reigniting interest in the Maya <b>civilisation</b> .
AD 2014	The cities of Lagunita and Tamchén are rediscovered.



### Religion

The Maya believed in many gods and goddesses. They thought that the gods/goddesses had a good side and a bad side and that they could help or hurt them. The Maya people would dance, sing and make offerings to the gods/goddesses.



Maya priests were believed to be able to communicate directly with the gods/goddesses. As a result, they were very important in society.

### The Afterlife

**The Middleworld** – The Maya people believed that the Earth, which they called the Middleworld, was large and flat and resting on the back of a creature, such as a turtle or crocodile.

**The Upperworld** – The Maya believed this was in the sky or heavens and was connected to the Middleworld by the branches of a tree.

**The Underworld** – A tree connecting its branches to the Upperworld was also believed to grow its roots down to the Underworld.