



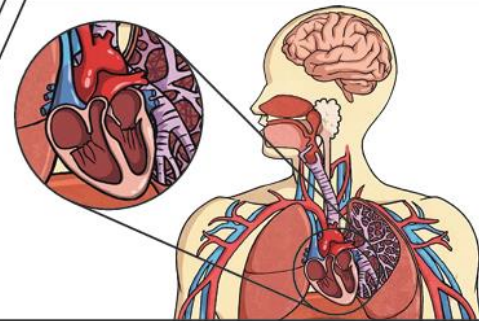
Animals, including humans.

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

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

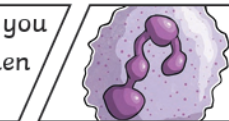


Plasma is liquid. The other parts of your blood are solid.

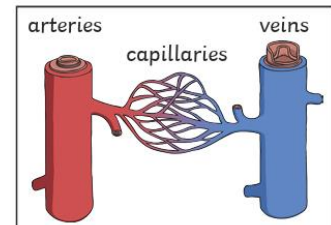


Red blood cells carry oxygen through your body.

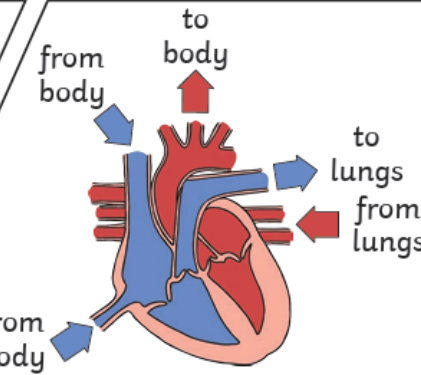
Platelets help you stop bleeding when you get hurt.



White blood cells fight infection when you're sick.



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**

**Investigations:**

- The effects of exercise on the heart rate.
- How does blood make its way around the body?

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.

Working scientifically:

- ✓ Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- ✓ Using test results to make predictions to set up further comparative and fair tests.
- ✓ Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.