



# Buglawton Primary School

Be the Best We Can

Topic:	Subject: Science	Year: 6	Term: Autumn
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### What should I already know?

- Describe the changes as humans develop to old age.
- What will I know and by the end of the unit?**
- Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.
- Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.
- Describe the ways in which nutrients and water are transported within animals, including humans.
- What will I be able to do by the end of the unit?**

- Can draw a diagram of the circulatory system and label the parts and annotate it to show what the parts do
- Use the role play model to explain the main parts of the circulatory system and their role
- Can use subject knowledge about the heart whilst writing conclusions for investigations
- Can explain both the positive and negative effects of diet, exercise, drugs and lifestyle on the body

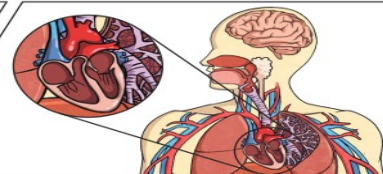
### Agreed Real-life outcome:

Produces a piece of writing that demonstrates the key knowledge  
e.g. explanation text, job description of the heart

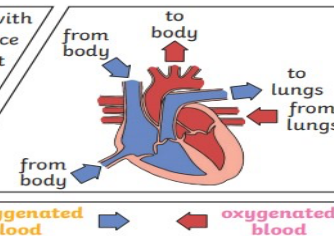
### Key Vocabulary

<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.

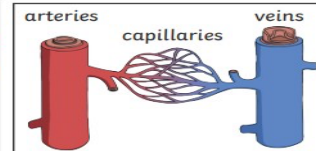


Mammals have **hearts** with four chambers. Notice how the blood that has come from the body is **deoxygenated**, and the blood that has come from the lungs is **oxygenated** again. The blood isn't actually red and blue: we just show it like that on a diagram.



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**.



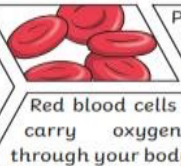
Veins carry **deoxygenated blood** toward the **heart**.

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

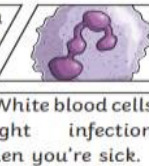
### Key Vocabulary

<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.

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

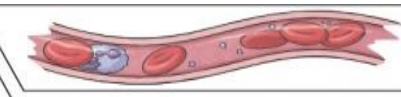
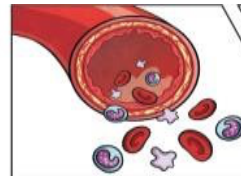


Platelets help you stop bleeding when you get hurt.



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

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



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.

### 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.

