



Umbrella question



How do humans grow and develop throughout their lives, and how does our heart keep us alive?

Hinge questions

How do humans grow?

How does the heart work?

How do lungs help us breathe?

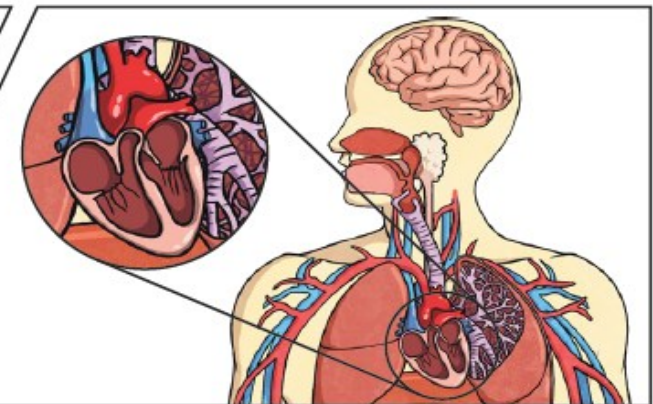
How does our blood move around our body?

What is in our blood?

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 .
blood vessels	The tube-like structures that carry blood through the tissues and organs. Veins, arteries and capillaries are the three types of blood vessels.
oxygenated blood	Oxygenated blood has more oxygen. It is pumped from the heart to the rest of the body.
deoxygenated blood	Deoxygenated blood 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.



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



Platelets help you stop bleeding when you get hurt.



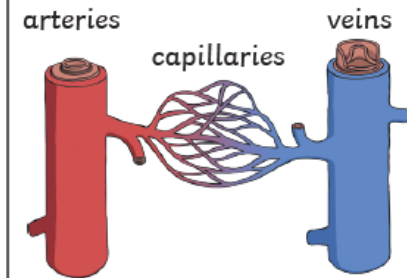
Red blood cells carry oxygen through your body.



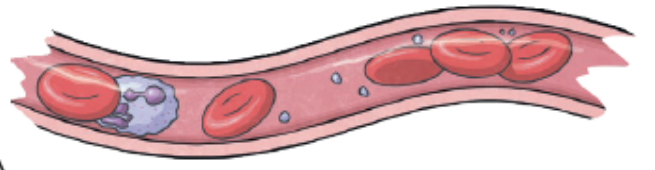
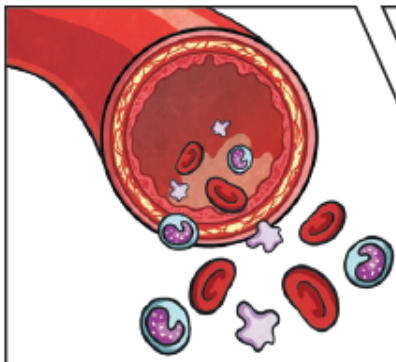
White blood cells fight infection when you're sick.

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**.



Blood transports:

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

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



prenatal



infancy



childhood



adolescence



early adulthood



middle adulthood



late adulthood