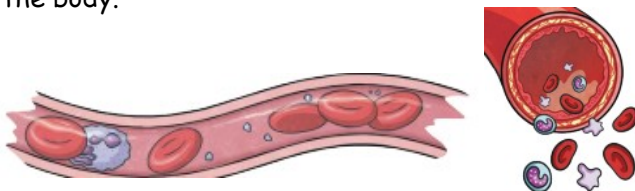




## Y6 Thinking like a scientist

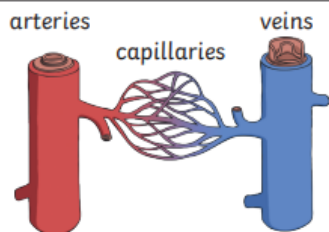
### Key Knowledge:

- Mammals have hearts with four chambers.
- Blood that has come from the body is deoxygenated, and the blood that has come from the lungs is oxygenated.
- The **heart** pumps blood to the lungs to get **oxygen**. It then pumps this **oxygenated blood** around the body.
- Red blood cells carry oxygen through your body.
- White blood cells fight infection when you're sick.
- Platelets help you stop bleeding when you get hurt.
- Plasma is liquid. The other parts of your blood are solid.
- Blood transports: gases (mostly oxygen and carbon dioxide); nutrients (including water) and 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 and strengthens bones.
- Drugs, alcohol and smoking have negative effects on the body.



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**.

|           |               |            |
|-----------|---------------|------------|
| heart     | blood vessels | oxygenated |
| Deoxygen- | circulatory   | alcohol    |
| nutrients | chambers      | drug       |

## Learning Questions

How does the circulatory system transport substances around the body?

What role does the heart play in the circulatory system?

How do the components of blood support life?

How do lifestyle choices affect the circulatory system?

Why does heart rate change during exercise?

How do alcohol, smoking and drugs affect the health of the human body?

