

**Lesson 2: Staying Alive**



- I can describe the functions of the heart, blood vessels and blood.



**Tick all the organs in the list below.**

Heart

Legs

Eye

Lungs

Brain

Liver

**Answer these questions:**

What is the circulatory system? \_\_\_\_\_

\_\_\_\_\_

What is the function of hormones? \_\_\_\_\_

\_\_\_\_\_

What does blood contain? \_\_\_\_\_

\_\_\_\_\_



As you have already learnt, the circulatory system is one of the most important systems in the body. Made up of the heart, blood and blood vessels, it is your body's delivery system, responsible for transporting materials throughout the entire body. At the centre of this system is the heart, which is a muscle about the size of a fist and is located in the centre of the chest, slightly to the left. Its job is to pump blood and keep it moving throughout the body. The blood is pumped around a complex network of blood vessels which extend to every part of the body. These vessels include: arteries which transport blood away from the heart; veins which return blood towards the heart and capillaries which surround body cells and tissues in order to deliver and absorb oxygen, nutrients, and waste. There are different types of artery, for example: pulmonary arteries transport blood that has a low oxygen content from the heart to the lungs, while systemic arteries transport oxygenated blood away from the heart to the body tissues. **What do you think would happen if your heart muscle was not working well?**

Within the vessels, blood contains the oxygen and nutrients needed to fuel the activities of the body's tissues and organs, and it plays a vital role in removing the body's waste products, such as carbon dioxide. Blood is composed of blood cells suspended in blood plasma. Plasma, which constitutes 55% of blood fluid, is mostly water (92% by volume), and contains proteins, glucose, mineral ions, hormones, carbon dioxide (plasma being the main medium for excretory product transportation), and blood cells themselves. Blood also delivers hormones, produced by the endocrine system, which regulate and control changes in the body. Without hormones bodies would not grow or develop properly, nor would they be able to regulate temperature and energy. Red blood cells live for up to 4 months and make approximately 250,000 round trips around the body before returning to the bone marrow, where they were born, to die.

**What do you think would happen if an artery or vein becomes blocked?**



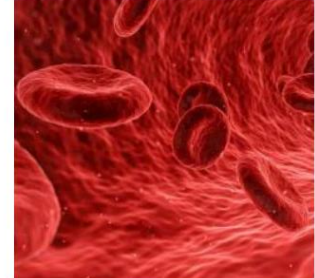
**What are the functions of the heart, blood vessels and blood? Why are they important?**



**HEART**



**BLOOD VESSELS**



**BLOOD**

**What does the heart do?**

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**Why is it important?**

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**What do blood vessels do?**

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**Why are they important?**

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**What does blood do?**

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**Why is it important?**

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**Find your pulse!**

Your pulse is a rhythmical throbbing of your blood vessels as blood is propelled through them. Where can you find it on your body?



1. On your wrist

2. \_\_\_\_\_

3. \_\_\_\_\_