

The human circulatory system

Outstanding Science Year 6 - Animals, including humans - OS6B001




National Curriculum Statutory Requirements

6B1 - identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood

Learning Objective



I can identify the main parts of the human circulatory system and explain their functions.

Me:   

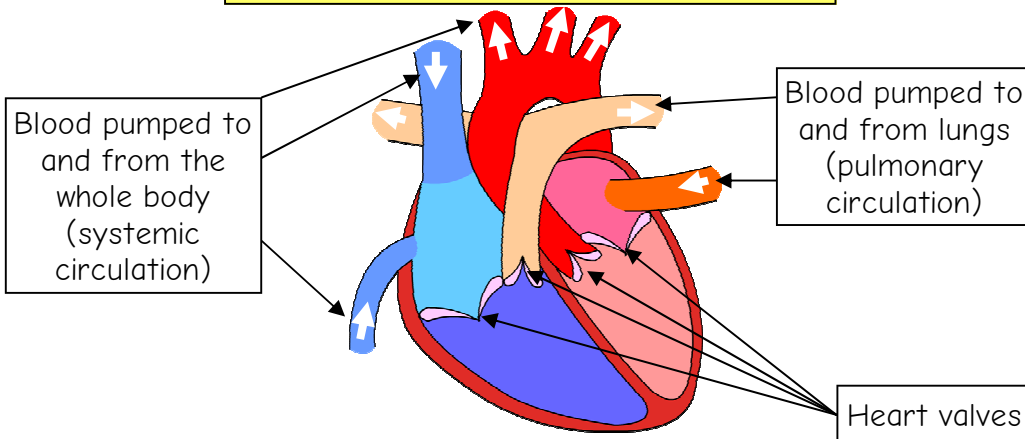
Teacher:   

There are two main parts to the **circulatory system** - the **pulmonary circulation** and the **systemic circulation**. In the pulmonary circulation, blood is pumped from the heart to the lungs and back. In the systemic circulation, blood is pumped from the heart to all of the other parts of the body and back.

The heart

The heart continuously **contracts**, or beats, pumping blood around the circulatory system. It contains **valves** so that blood only flows in one direction.

The human heart (not true colours)

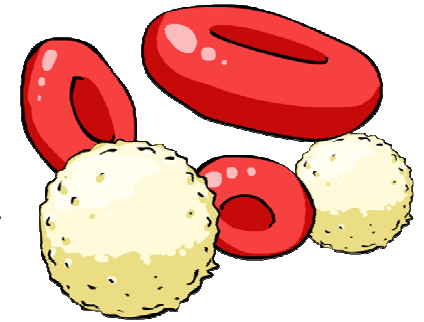


Blood vessels

The blood vessels are the tubes within the human body which carry blood. Blood vessels include **arteries** and **veins**. Arteries carry blood away from the heart, and veins bring it back. Blood vessels are thick and wide near the heart, but branch off into smaller ones called **arterioles**, **venules** and **capillaries**.

Blood

Blood is important because it carries materials around the body. It contains **red blood cells**, which carry **oxygen** - every living cell in the body requires oxygen, or it will quickly die. Blood also carries **white blood cells**, which fight infections, and **platelets**, which clot together to stop bleeding. It also carries other nutrients, such as sugar and salt. In addition, blood carries waste **carbon dioxide** from around the body to the **lungs**, where it can be removed.



Red blood cells carry oxygen. White blood cells fight infection.

Activity

Use the information in this page, plus any additional research, to complete the information text on the following page. Draw and label a suitable diagram to illustrate your text.

Discussion

Why is cardiac arrest (when the heart stops beating) such a serious condition? What are its effects?

The human circulatory system

The human circulatory system is made up of the heart, blood vessels, and blood itself. It is vital for keeping us alive.

What are the two main parts of the circulatory system?

How does the heart pump blood?

What is the difference between arteries and veins?

What is the difference between red and white blood cells?

