Castlefield School - Science

Topic: Circulatory System	Year: Six	Theme: The Human Body	Strand: Biology

Key Concepts

What is the Circulatory System?

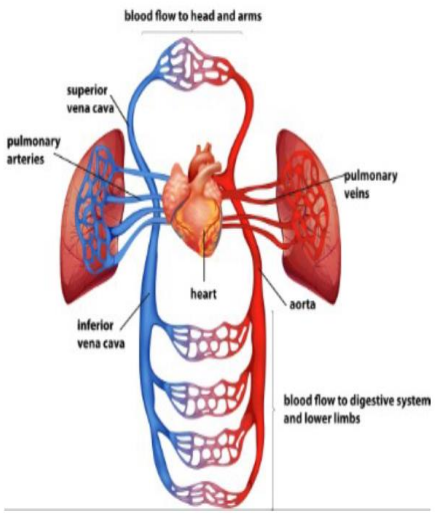
- The circulatory system is made of the heart, lungs and the blood vessels.
- Arteries carry oxygenated blood from the heart to the rest of the body.
- Veins carry deoxygenated blood from the body to the heart.
- Nutrients, oxygen and carbon dioxide are exchanged via the capillaries.

The Heart

- The heart is composed of four chambers;

the right atrium, the right ventricle, the left atrium and the left ventricle.

- How often your heart pumps is called your pulse.



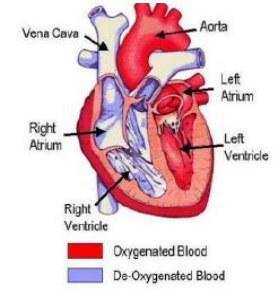
The Circulatory System

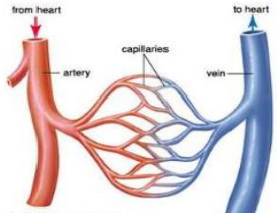
1. The right atrium collects the deoxygenated blood from the body, via the vena cava. It sends the blood to the right ventricle.

2. The right ventricle pumps the deoxygenated blood to the lungs. Here the blood picks up oxygen and disposes of carbon dioxide.

3. The lungs send oxygenated blood back to the left atrium which pumps it to the left ventricle.

4. The left ventricle pumps the blood to the rest of the body, via the aorta.





Choices that can harm the Circulatory System

- Some choices, such as smoking and drinking alcohol can be harmful to our health.
- Tobacco can cause short-term effects such as shortness of breath, difficulty sleeping and loss of taste and long-term effects such as lung disease, cancer and death
- Alcohol can cause short-term effects such as addiction and loss of control and long-term effects such as organ damage, cancer and death

Why is exercise so important?

Exercise can:

- tone our muscles and reduce fat
- increase fitness
- make you feel physically and mentally healthier
- strengthens the heart
- improves lung function
- improves skin

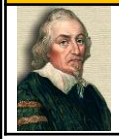
Key Vocabulary

aorta	The main artery through which blood leaves your heart before it flows through the rest of your body.
arteries	A tube in your body that carries oxygenated blood from your heart to the rest of your body.
atrium	One of the chambers in the heart
blood vessels	The narrow tubes through which your blood flows. Arteries, veins and capillaries are blood vessels.
capillaries	Tiny blood vessels in your body.
circulatory system	The system responsible for circulating blood through the body, that supplies nutrients and oxygen to the body and removes waste products such as carbon dioxide.
deoxygenated	Blood that does not contain oxygen
heart	The organ in your chest which pumps the blood around the body
lungs	Two organs inside your chest which fill with air when you breath in. they oxygenate the blood and remove carbon dioxide from it
nutrients	Substances that helps plants and animals to grow.
organ	A part of your body that has a particular purpose
oxygenated	Blood that contains oxygen
pulse	The regular beating of blood through your body. How fast or slow your pulse is depends on the activity you are doing.
respiration	Process of respiring: breathing; inhaling and exhaling air.
veins	A tube in your body that carries deoxygenated blood to your heart from the rest of your body.
vena cava	A large vein through which carries deoxygenated blood to your heart from the body
ventricle	One of the chambers of the heart

Working Scientifically Skills

Using Scientific knowledge to ask questions.	Using scientific language to draw conclusions.
Recognising when to use other sources to answer questions and separating opinion from fact.	Planning different types of enquiry controlling variables where necessary

Famous Scientists



William Harvey (1578-1657) made the momentous medical discovery that the flow of blood must be continuous and that its flow must be in one direction only.