



# Animals including humans Year 6

## What I need to know

- The heart pumps blood through blood vessels to the lungs. From the lungs, oxygen goes into the blood and carbon dioxide is removed. From there, the blood goes back to the heart where it is pumped around the body.
- Nutrients, water and oxygen are transported in the blood to the muscles and other parts of the body where they are needed. Carbon dioxide and other waste products are produced.
- Carbon dioxide is carried by the blood back to the heart and the cycle starts again. This is the human circulatory system.
- Diet, exercise, drugs and lifestyle have an impact on the way our bodies function. They can affect how well our heart and lungs work, how likely we are to suffer from conditions such as diabetes, and generally how fit and well we feel.

### Ibn al-Nafis



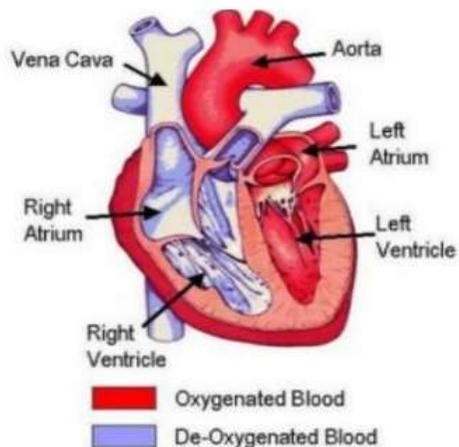
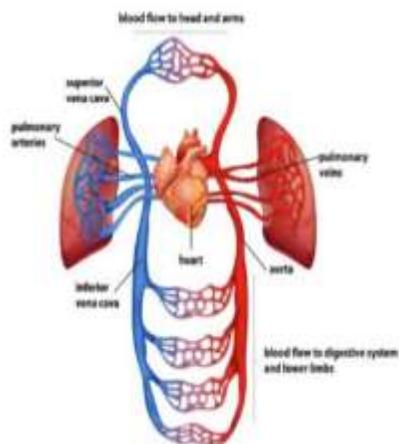
- Born in 1213
- An Arab physician who made significant contributions to the early knowledge of the pulmonary circulation.

### William Harvey



- Born in 1576
- A British physician who was the first person to correctly describe blood's circulation in the body.

## The circulatory system



1. The atrium collects deoxygenated blood from the body. It sends the blood to the right ventricle.
2. The right ventricle pumps deoxygenated blood to the lungs. 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.



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Key Vocabulary		
Arteries	Tubes in your body that transport blood with oxygen (oxygenated) in to the rest of your body.	
Veins	Tubes in your body that carry blood without oxygen (deoxygenated) back to your heart.	
Carbon dioxide	A gas produced by animals and humans and is released into the air when they breathe out.	
Circulatory system	The system in the body that circulates blood around the body providing nutrients and oxygen to the body and removes carbon dioxide.	
Oxygen	A colourless gas that animals need to survive.	
Respiration	The process of inhaling and exhaling air, breathing.	
Pulse	The regular beating of blood through your body. It speeds up or slows down depending on your activity level.	
Heart	An organ in your chest that pumps blood around your body.	
Lungs	Two organs inside your chest which fill with air when you breathe in.	
Diet	Exercise	Drugs
<p>A healthy, balanced diet can have a huge effect on a person's health. People who eat a balance of healthy food are less likely to suffer from chronic illness. Fatty foods can block blood vessels and make it difficult for the heart to do its job.</p>	<p>When we exercise, our body needs more oxygen. So we breathe quicker and our lungs take in more oxygen. Our heart needs to pump quicker to get all the oxygen around the body. In order to do this, our heart rate increases. Regular exercise strengthens our heart, improves lung function, tones muscle and reduces fat, and helps our bones and muscles to become stronger.</p>	<p>Drugs are chemicals that have an effect on our bodies. Some drugs are prescribed by doctors to make people healthy. Other drugs are illegal and can be dangerous to our health. Alcohol is a drug and can cause damage to the liver and brain. Cigarettes contain nicotine, which is an addictive drug. Cigarettes cause damage to our lungs and heart.</p>
		